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CONCERNING THE BLIND



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CONCERNING THE BLIND

Being a Historical Sketch of organised effort
on behalf of the Blind of Great Britain, and
some thoughts concerning the mental life of
a person born Blind

BY

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PREFACE

THE introduction of a preface provides an opportunity for a personal note carefully avoided in the pages that follow, and so presents a temptation too strong to be resisted. This book, short as it is, has been twenty years in the making. Part of it has been in typescript for longer than I care to think. It has been put together in a straggle of odd half-hours, has been repeatedly relegated to the backmost pigeon-hole, has been taken down, dusted and put back again until its unfinished condition has become an annoyance and a reproach.

I have tried to give, within a modest compass, a sketch of the development of organised effort on behalf of the blind in Great Britain and have added some thoughts on the mental life of a person born blind. I had intended, in a third section, to discuss the problems which confront the teacher in a school for blind children, but that design, alas, is still in the unsubstantial region of pious hopes. It has therefore been thought best to bring out the book in its present form. To have waited for a further indefinite period might have led to the idea of publication being given up altogether.

The slowness or rather the spasmodic nature of the

composition has, I fear, added to the book's defects. Written in disconnected snatches it cannot fail to be patchy and uneven. All the same, it is without apology that it is offered to the public. A work of this kind was needed and indeed was overdue. It is surprising that no comprehensive survey of work for the blind in this country has hitherto been made. The research has proved of great interest but of no little difficulty. The raw material was scattered over a wide field. Much of it was in remote and almost inaccessible corners. A good deal had to be disentangled from Government Blue Books, Conference Proceedings and old Institution Reports. Owing to the fragmentary and diffuse nature of these sources, it has not been easy to present the whole in readable form. There was constant need for sifting and arrangement, for a drastic use of the pruning-hook, for the enforcement of some law of proportion and perspective. My aim has been to build up a definite and well-balanced picture, free from irrelevancies, pet theories and preconceived ideas. I do not flatter myself that I have wholly succeeded, only that I have kept these admirable virtues steadily in view.

However desirable it might be that every worker among the blind should know something of the domain in which he laboured, it was unreasonable to expect teacher, manager or committee member, busy with his daily routine, to spend his leisure in such tedious exploration. That he will now be saved the necessity is one intention of this little book.

My last word must be an expression of grateful thanks to those fellow-workers who have helped me to obtain several of the portraits of pioneers; to my friends W. M. Stone and E. D. Macgregor for valuable criticism and advice; and to my wife, without whose stimulus, strictures and constant co-operation the work would never have been done.

J. M. R.

HAMPSTEAD,

Sept. 1929.

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CONCERNING THE BLIND

CHAPTER I

EARLY DAYS

IT is sometimes said that sight is an anticipatory sense of touch. It enables man to ward off approaching dangers and assists him in satisfying his elemental needs. Conversely, lack of sight reduces him to helplessness and dependence. At the same time the deprivation is so arresting that a full measure of human sympathy has always gone out to those who suffer from it. It is this unhappy conjunction of weakness and appeal that has brought about the unfortunate association of blindness with mendicancy. In primitive society and sometimes in societies not so primitive, the blind beggar was and is the typical blind man. Inevitably there were exceptions. Here and there intellect and force of personality would overcome all handicaps and a blind man would win place and reputation. Occasionally a man who was already filling a conspicuous niche in the world's affairs would be deprived of sight, and, refusing "to bate one jot," would continue to render brilliant service to his kind. Such an one was John Ziska, the fifteenth-century

Bohemian patriot, who in mid-career rose from the bed to which he had been carried blinded and returned to the head of his troops. There is no barrier to such indomitable fortitude, and it is not surprising to read of desperate victories which the blind commander wrung from his encircling enemies until at last his country stood united and free. Everyone will remember, too, that the coat-of-arms of the Prince of Wales was taken from the blind King who fell at Crécy.

Still more interesting are those who, though lacking sight from early years have kept their names from oblivion. Diodorus, the teacher of Cicero and Didymus, the teacher of St Jerome, were both of this class, as was also Ludovico Scapinelli, Professor of Eloquence at Modena. Another Italian, Blaise de Pagan, was an authority on fortifications and mathematics, while in Great Britain the names of Nicholas Saunderson and Thomas Blacklock add lustre to the roll call of the blind.

Saunderson, who was born in 1682, lost his sight in infancy from smallpox. He was sent to a school for ordinary children at Penistone in Yorkshire and made remarkable progress, particularly in the classics. His bent for mathematics was discovered later, and when still a young man he set up as a tutor in Cambridge. On the Professorship of Mathematics falling vacant Saunderson was appointed and, till his death in 1739, filled the post with distinction. For his own studies he invented a tangible method of working arithmetic and geometry which proved the starting-point for subsequent inventions.

Blacklock's abilities lay in a more literary direction. He was born in Annan in 1721 and like Saunderson became blind in infancy. Like Saunderson, too, he was educated at a grammar school and showed much aptitude and talent. He studied Divinity, and for a short time had charge of the Parish Church of Kirkcudbright. He then turned schoolmaster and wrote verses which gained him the friendship of Robert Burns. He was keenly interested in the education of the blind, and by his example undoubtedly made easier the founding of the Edinburgh Institution.

Two more eighteenth century figures call for mention. These are Weissenburg, who was born in Mannheim in 1756, and Maria Theresa Paradis, born in Vienna in 1759. Both were of exceptional ability and won European reputations. Weissenburg was fortunate in having a clever tutor who invented or adapted apparatus for mathematics and geography which not only served their immediate purpose but had an influence on future developments. Fraulein Paradis was a gifted musician, singing and playing to the admiration of all.

Outstanding instances of what can be achieved by human will in its struggle against untoward circumstances never fail in their appeal, yet it must be admitted that Saunderson, Weissenburg and the rest have little place in the story of organised effort on behalf of the blind. Indeed, such cases are of service to the historian mainly for the way in which, by contrast, they reveal the sad condition of the normal. The ordinary blind person of pre-nineteenth century days has left no record. It

must be repeated that from the very nature of things he was a derelict, eddying about life on the charity of his relatives and the public. His education was an informal affair, picked up in the hard school of the streets. His ideal did not rise above the level of expediency. His virtues were those qualities which contributed most to success, as success was reckoned in the sordid existence of the parasite. It is little wonder that long before there had dawned on men's minds the idea of educating the blind to take an active part in the general interests of the community, the simpler plan of removing them altogether from the unfair competition of life had many times won its way with the tender-hearted. Miss E. R. Scott in her little essay on *The History of the Education of the Blind prior to 1830* says that, "St Basil established a hospital for the blind at Cæsarea in Cappadocia, in the fourth century. In the fifth century the hermit St Lymnæus established a refuge for them in Syria, and two centuries later St Bernard, the Bishop of Le Maus, founded a similar institution. The earliest asylum for the blind in this country was founded in 1329 by William Elsing, a London mercer. This was known as Elsing Spittle or Spital. It stood near London Wall and provided shelter for one hundred blind men. "It was confiscated," says Mr Charles Pendrill, "at the Reformation on the excuse that in the Middle Ages all hospitals were religious foundations."

Paris has the distinction of possessing an asylum so ancient that its origins are still obscure. It was



Valentin Haüy.

formerly thought that L'Hôpital des Quinze-Vingts had been founded by Louis IX. as a refuge for three hundred blinded Crusaders, but it is now clear that the institution is older than Louis himself, who rebuilt it in 1260. No industries were followed and time must have hung heavy on the hands of the inmates, yet it is probable that life was as pleasant as its aimlessness would permit and that the hostel had usually within its walls energetic spirits whose activities surprised the casual visitor. Such at least is the reasonable deduction from the following page of Montesquieu's *Persian Letters* written in 1721. The correspondent is supposed to be a Persian enjoying a European tour :

"I went the other day to look through a house where a meagre provision is made for some three hundred people. I was not long about it ; for the church and buildings do not deserve much attention. Those who live in this establishment were quite cheerful ; many of them played at cards, or other games of which I knew nothing. As I left, one of the residents left also ; and having heard me ask the way to the Marais, the remotest district of Paris, 'I am going there,' said he, 'and will conduct you ; follow me.' He guided me wonderfully, steered me through the crowds, and protected me dexterously from carriages and coaches. We had almost arrived, when curiosity got the better of me. 'My good friend,' I said, 'may I not know who you are?' 'I am blind, sir,' he answered. 'What!' I cried, 'blind? Then why did you not ask the good fellow who was playing at cards with you to be our guide?' 'He is blind, too,' was the answer ; 'for

four hundred years there have been three hundred blind folks in the house where you met me. But I must leave you. There is the street you want. I am going with the crowd into that church, where, I promise you, people will be less in my way than I will be in theirs.' ”

The picture is a lively one, and yet such asylums were but a palliative and to some extent an evasion of the real problem. It was towards the end of the eighteenth century that organised endeavour for the education of the blind had its beginning. It was a momentous step. By it a new order of life was revealed. The blind of all succeeding generations are the heirs of the heroic pioneer who took that step. This was Valentin Haüy, who in 1784 established in Paris the first school ever known for blind children. His efforts gained the tribute of imitation. The appeal of the blind when made to the public met with a generous response, and by the middle of the nineteenth century twenty institutions had been opened in the British Isles alone.

In this country the work, apart from poor relief, was continued for many years on a purely voluntary basis. Then in the third quarter of the century assistance from the Guardians of the Poor was occasionally obtained by institutions towards the cost of the maintenance and training of industrial pupils. This was the only form of subvention from public funds till in 1890 and 1893 the education of blind children was accepted by the community as a public duty. The Acts of these years introduced the factors of centralised control

and of contributions from Education Authorities and so inaugurated a new phase. Another generation had to pass away before the last great forward step was taken and centralised control with financial assistance from local authorities came into play in connection with the problems of the adult blind.

It is a story of much interest, a record of unselfish labours, of hopes and aspirations, of controversies not always without reproach, but above all and hallowing all, of ardent desire on the part of a multitude of self-sacrificing men and women to bring into the lives of the blind happiness and self-respect in place of age-long apathy and despair.

As the first educational institution for the blind in existence the Paris School calls for special attention, and no apology is offered for retailing its origins and the fortunes of its early years. Its founder, Valentin Haüy, was born in Picardy in 1745. He came to Paris and worked as a subordinate official in the Foreign Office. The incident which turned his thoughts in the direction of his real life's work has often been quoted, but is worth recounting. On one of the Boulevards near a fashionable café where the townsfolk thronged of an evening a dozen blind men grotesquely attired and with pasteboard spectacles on their noses "were placed along a desk which sustained instruments of music where they executed a discordant symphony and gave delight to their audience." Such a scene would be revolting to modern sensibilities as it was to Haüy's, but after all it may be taken as showing

a gradual advance from barbarism when compared with incidents of an earlier age. The following episode, for instance, from the annals of the fifteenth century may be presumed to be characteristic of the taste of that boisterous period: "In August 1425, four blind men covered with armour and armed with staves were shut up in the lists of the Hotel d'Armagnac with a pig of great size, which was to be the prize of the man who should kill it. When the contest began, the poor blind men, pursuing the pig and striking at random, gave one another such rude blows, to the great delight of the lookers-on, that they grew angry; for when they were most confident of hitting the pig, they hit one another; and if they had not been covered with armour, they would in truth have slain each other."

Haüy had his thoughts turned to the education of the blind in 1783, and began his experiments with a boy named François le Sueur whom he found begging at the door of the Church of St Germain des Prés. Le Sueur had been born at Lyons in 1766 and had lost his sight when an infant of six weeks. He had been brought to Paris in 1778 and had for some years been supplementing the family income in the manner above described. When Haüy took him in hand in October 1784 he was seventeen and in six months he was able to read. In less than a couple of years he had made excellent progress in the French language, geography, and music.

Unfortunately, le Sueur's later career was a disappointment to his devoted teacher. At the age of

fifty or thereabouts, when he died, he was a pensioner in the **Quinze-Vingts**. In a huge crown folio volume, compiled in 1820 for the use of scholars and embossed at the Institution, a mournful epitaph is to be found. The following is a literal translation of the passage. "It is painful to say that le Sueur did not know how to shew thankfulness towards his benefactors and his masters to whom he owed everything. By his conduct he merited the reproach of ingratitude which is made, with some foundation, against nearly all the blind."

In the early part of 1785 Haüy took his pupil to a meeting of the Academy and read to that learned assembly a paper on the education of the blind. His project was well received and a number of the members supported him in a more general experiment. A philanthropic society was already in touch with a few blind children to whom it distributed monthly gratuities, and these young pensioners formed Haüy's first class. He had carefully studied methods that had been employed by individual blind people of his own and previous times, and had adopted all that seemed to him of service. Thus when the Academy of Sciences reported on his enterprise in 1785, just a year after **L'Institution Nationale des Jeunes Aveugles** had been established in the Rue Notre Dame des Victoires, they demonstrated their own erudition by pointing out the various directions in which Haüy had benefited by his predecessors. They exhorted him to proceed, however, and condescendingly professed their willingness to receive

from him further accounts of his success. In the same year he was summoned to appear with his pupils before the Court at Versailles. It was a time when philanthropic enterprises of various kinds became successively fashionable, and for a few years the **Institution for Blind Children** enjoyed this fickle fortune. According to its founder, learned societies competed for the satisfaction of seeing among them "young blind children lisp out the first elements of reading or of calculation."

In 1786 there were thirty pupils in the institution and the charitable public rallied to its support. Unfortunately dark days were at hand, and in the turmoil of the Revolution the call of a school for the blind sounded faint and far off in the ears of people grimly occupied with matters of vital import to themselves. In 1801 the First Consul decreed that the pupils should be moved to the Paris Blind Asylum. This was the **Hôpital des Quinze-Vingts**, of which mention has already been made. It was a disastrous change for the lively youngsters of Haüy's School. Education languished in the new environment. Governments have a liking for methodical paper arrangements, and Napoleon's bureaucrat, whoever he was, had probably no more malevolence in his composition than have the pundits of Whitehall to-day who breezily group together the blind, the deaf and the mentally defective. In the following year Haüy was thanked for his past services and turned out of office. For a year or two he ran a private school for

the blind and then spent eleven years in Petersburg, returning to Paris in 1817. For most of this time his blind protégés and their successors idled in the *Quinze-Vingts*, but in 1815 **L'Institution des Jeunes Aveugles** was again separated and set upon its feet with Dr Guillié at its head. "To his energy and devotion," says Miss Scott, "the reorganised institute owed its almost instant success. Not only did he obtain new instructional apparatus, and new type for printing embossed books and music, but he left no stone unturned to teach his pupils every possible handicraft. They learnt spinning, weaving, knitting, chair-caning, rope-making, shoe-making and harness-making." Unfortunately Dr Guillié was not successful in making his pupils self-supporting when they left the institution. In 1833 Dr Howe, the pioneer of work among the blind in America and first Principal of **Perkins' Institution** in Boston, Massachusetts, made a tour of the European Schools, and came to the conclusion that though the Paris School was a showy one and the children happy and well cared for, the system itself was a failure in that not more than one in twenty were able to support themselves on leaving.

A better state of things was brought about between the years 1830 and 1840 by the introduction of piano-tuning as a profession for the blind. Thereafter the school specialised in training for this occupation to the exclusion of other handicrafts, and by its proportion of successes roused the admiration of Dr Armitage a generation later.

As piano-tuning is now one of the most widespread and desirable callings for those blind who have an ear for music, the manner of its adoption is not without interest. Claude Montal was a pupil at the institution, and with a fellow-student got himself into trouble for tampering with the action of the school piano. In spite of this discouraging start he and his friend obtained permission to buy the wreck of an instrument and keep it in the institution. This they studied carefully and at length were able to restore it to playable condition. Montal afterwards became one of the best known tuners in Paris.

It may be of interest to note that in Paris the experiment was tried of teaching blind and seeing pupils together. The same was done at **Worcester College** in its early days and in recent years there has been in America a revival of the idea.

Before the end of the eighteenth century four British institutions had followed in the wake of the **Jeunes Aveugles**, and before 1850 sixteen more had been added to the list. Although a certain similarity runs through their records they are yet so distinct and individual that a few lines must be devoted to each.

The first was founded in Liverpool in 1791. Edward Rushton is a more than usually picturesque figure in the staid annals of blind education. He was a man of forceful personality, unselfish and courageous. While serving as a lad on board a slaver he lost his sight through ophthalmia. The epidemic had broken out among the blacks and Rushton is said to have laboured



Edward Rushton.

heroically and to his own privation in the attempt to mitigate the sufferings of the ship's unhappy cargo. Later in life Rushton partially regained his sight, but his sojourn in darkness turned his thoughts to those who were in like case with himself and stimulated an active desire to relieve their distress. Before any steps were taken towards the founding of a society, he received advice and assistance from a Mr John Christie, and on his suggestion his idea of a Benefit Club was enlarged and it was decided that instruction in music should also be given.

The resultant institution began in two houses knocked into one, and after a removal to a second address where the accommodation for resident pupils was considerably larger, it was transferred in 1851 to the present building in Hardman Street. Very early in its history, basket-, mat- and mattress-making were added to the occupations taught. The pupils were expected to leave at the conclusion of their training and turn that training to use in their own homes.

In 1793 two more institutions were founded, one in Edinburgh and one in Bristol. The Edinburgh Asylum was for young people and adults and aimed mainly at industrial training and employment. Its founder was an energetic divine of Leith called David Johnston, and its exact title was the **Society for the Relief of the Indigent Blind**. In a couple of months, workshops were opened and the title was changed to that of the **Asylum for the Industrious**

Blind. In 1825 a home for blind women was opened under the same management. Education was not neglected, but the authorities had no faith in embossed literature or its place in the training of the young blind. At the same time, Edinburgh was the scene of James Gall's lifelong efforts to make the blind a literate section of the community. The strong divergence of opinion between the Asylum and Mr Gall led to the founding, in 1833, of an independent establishment for the teaching of blind children to read. This venture, which began modestly with one blind teacher and one pupil, soon grew to respectable proportions. In 1876, when amalgamation of the two charities took place, the women from their home and the children from their quarters in Gayfield Square were transferred to handsome new buildings in Craigmillar Park. The inauguration was carried out with an amount of military pomp and civic circumstance never known before or since in the world of the blind.

The **Bristol Institution** was founded by two members of the Society of Friends and began with four boys and two girls who were to be trained in industrial occupations and later given employment. Plaiting whips and spinning flax were experimented with, but before long the more usual trade of basket-making became the staple occupation of the institution. To begin with the pupils attended daily, but in 1803 accommodation was provided for resident girls and later on for resident boys. The institution grew

rapidly in size and importance until within forty years of its founding it was worthily established in Lower Queen's Road where residence and instruction were provided for nearly one hundred pupils as well as employment for the workers.

The last British institution to claim birth in the eighteenth century was the **School for the Indigent Blind** of St George's, Southwark, which was founded in 1799. Fifteen blind persons were to be "educated, maintained and taught a trade." The site of the first school was soon claimed for the building of the Bethlehem Hospital, and premises facing St George's Circus were taken. These were greatly extended on more than one occasion, and were at last sold to the Baker Street and Waterloo Railway in 1901. In 1827 the number of resident pupils had risen to 55 boys and the same number of girls, a total which was later increased to 150. In 1826 mat-making was introduced as a new industry for the blind, and has since that date proved one of the chief trades followed by the institution. Six years was the period fixed as the duration of a pupil's stay, and it was not till 1874 that workshops were set up in part of the basement for those whose training was completed. Some light is thrown on the system of training in vogue from the following report which appeared in the same year. "Mental and industrial training," it states, "commence together [at the age of 10]. After the first year more time is given to the latter than to the former, and after the fourth year, if fair progress has been made

in the schoolroom, almost the whole time is devoted to industrial pursuits."

In 1880 a separate department for elementary pupils was opened at Linden Lodge, Wandsworth Common. This was continued for twenty-one years when the responsibility for this branch of work was handed over to the London School Board. In 1826 the school was incorporated under Royal Charter and in 1911 it was allowed to prefix "Royal" to its title. In 1902 the school was moved to a fine new building in Leatherhead. Pupils are received there at the age of 16 and remain till the end of their industrial training. Employment is provided in a branch of the institution known as the **Blind Employment Factory**, situated in Waterloo Road not far from the original home of the institution.

It would be tedious to recount the origins of all the British institutions which were founded in the next half century, and yet such information is useful and indeed necessary if a complete view is to be obtained. Particulars of these foundations have therefore been collected and will be found in the first Appendix to this volume. A note has also been added on the early schools of America and the Continent of Europe.

A survey of these early institutions shows that they can be classified as variations within a common species. The majority provided elementary and industrial training. Some gave employment to a varying proportion of those whom they had trained, while others offered to a few of the older blind an asylum where they, while

partly self-supporting, might rest secure from the buffetings of the world.

It cannot fail to have been noticed that the work was of necessity local and sporadic. Each institution provided for as many children or adults as its funds permitted. Each had a certain number of places. The fortunate secured them. For the unfortunate there was no provision. The time was not ripe for any comprehensive treatment of the problem as a whole. Machinery for dealing with it on a national basis was to come but only at a much later date.

CHAPTER II

COMPARISONS

IT is disappointing to note that while both on the continent of Europe and in America there were men who became outstanding educationalists in this special field, no such figures appeared in Britain. Valentin Haüy's claim to remembrance is that he was the first to show the way. He asserted, and backed his assertion by the devoted labours of a lifetime, that the blind could and should be educated. To that end he made use of much earlier knowledge to which he added his own contribution, the inauguration of embossed print. His successor, Dr Guillié, multiplied the number of occupations which the blind could learn, but while he thus demonstrated the versatility of his pupils, he made small lasting impression on the theory or practice of their education. Still, he was a noteworthy figure and for many years his name was synonymous with that of the famous school he directed.

Comparable with these is the name of Johann Klein who, born in Bavaria in 1765, founded the school at Vienna in 1804. His early experiments were similar to those of Haüy, but his after-career was less chequered than that of the Frenchman. Beginning with a single pupil, he steadily built up a successful school which in

his own lifetime became a State institution and has from his day till now maintained its place in the foremost rank. Klein, for the sake of propaganda, turned author in 1805, and followed his first pamphlet with a succession of scholarly volumes on the education of the blind. These added substantially to his reputation, and even to-day they can be read with interest and appreciation.

In America, Samuel Gridley Howe stands out pre-eminently both as a philanthropist and as a teacher, while his individual labours with Laura Bridgeman give him a niche among the innovators. Apart from his original work in this direction, he served the blind of his time and State by a shrewd and discriminating choice of the best features which he found in the schools of other lands. Like Haüy, he was ready to avail himself of the originality of others.

In contrast to these educators, Britain is lacking in distinguished names. None of the early schools were fortunate enough to secure the services of a Guillié or a Klein. Nearly every man or woman mentioned in connection with the early days of blind education in this country was a busy philanthropist who could only spare a fraction of his time for this particular line of work. Taylor is the nearest approach to a pedagogical pioneer, but his supervision of the school at York had to be carried out in the scanty leisure of a conscientious parson. Gall and Alston took a fatherly interest in the schools of their respective towns, but their pet protégé was not so much the blind child as the types they had

invented for his use. Rushton and David Johnston were picturesque figures, but are not of the company of Arnold or of Thring.

The difference between Britain and the Continent in this respect is probably fortuitous, but it may be put forward as a possible explanation that the British institutions, being large in number and small in size, are to some extent themselves responsible for the dispersion of talent in their Principals. Paris, Berlin and Vienna stood for their respective countries in a way that no school in this island could do. London could not emulate foreign capitals, and St George's, in spite of its metropolitan position, could not claim more than parity with its friendly rivals in Liverpool, Edinburgh and elsewhere.

Few descriptions are to be found of the educational life that went on in these early British foundations. Annual reports and accounts of ceremonial proceedings can be had in plenty but these are full-dress affairs and lack the personal touch of more intimate records. What a stroke of fortune it would have been to the chronicler if some hero or heroine of one of the detail-loving novelists of the day had spent a few years in such a setting. Nothing so simple and straightforward is to be found, however, and side-lights and casual references must be called upon to supplement and humanise the rather pompous official documents of the time.

In its general attitude to education and, more indirectly, in its particular methods, the school reflects

the world outside. The general attitude to life of the average man of to-day is different from that of his grandfather. For better or for worse, duty, dogma, providence and responsibility had much more definite and binding connotations to the early nineteenth century than to the early twentieth. They meant more and meant it with deeper assurance and command. The school could not but feel their influence. The well-disposed of that time believed, too, in charity and devoutness. Committee-men and managers took an interest in the inmost being of their charges which to-day sounds morbid and impertinent. Just as in the fifteenth century the motive which led Columbus to voyage forth on uncharted seas was not so much to add a new continent to the realms of the King of Spain, as to bring fresh tribes and races into the fold of the Catholic Church, so in the nineteenth the pioneers of blind education felt it to be their chief concern to "save souls for Christ."

Reading was taught that the Bible might be studied and that the blind, by this means, might be led from theological darkness into light. The following paragraphs come from the year 1848: "M. R., a day scholar, having rapidly learned to read, afterwards carried home with her the embossed Scriptures, and the inspired word, read by the blind child to her parents, produced in them a religious change, manifest and decided in its character." "S. R., a blind Irish girl, suffering from great delicacy of health, was received into the school two years prior to her death, under

peculiarly providential circumstances. It was deeply interesting to her Christian friends to remark how gradually she was led from the errors of Romanism to the pure doctrines of the Word of God, by a blessing on the power she acquired, to search the Scriptures for herself." "There is no more vile abortionist," says Bernard Shaw, "than he who would mould the mind of a child," and though no teacher must take Mr Shaw too seriously as an educationalist his hyperbole shows the direction in which modern thought is tending. A hundred years ago the young mind was regarded as plastic clay on which the instructor was ever keen to set the impress of his thumb. Nowadays more respect is felt for the child's individuality. The age of authority has passed and liberty for the young idea is the order of the day.

The extent to which reading was practised by the blind before the introduction of Braille is probably exaggerated by the apologists of the various types, for in spite of their zeal it can be gathered from contemporary accounts that oral instruction by the teacher and the memorising abilities of the pupils played the most important part in their education. The report of one school for 1843 gives "as a proof of the docility and industry of the adult inmates who are instructed in music, the fact that they have voluntarily committed to memory the whole of the Psalms contained in the Book of Common Prayer. This they have done in a shorter space of time, so far as the Board are aware, than has been done in

any similar Institution." Many quotations of a similar nature could be given from the records of other schools for the same period.

Religious instruction and the reading of the Scriptures were the leading subjects of the curriculum, but very soon they were supplemented by others. The following paragraphs which were written in 1851 in respect of one school may be taken as having a more general application :

"The first and most anxious desire [of the management] is to promote the spiritual welfare of their pupils by a system of careful religious instruction; but they are not insensible to the advantages arising, even to this object, by the mental training and general development of the faculties produced by a sound education. While, therefore, the Word of God has been made the basis of all else, the attention of our committee and of their officers is by no means limited to this single object, but extends to all the branches of a sound education.

"By means of an apparatus prepared for this purpose, a sound knowledge of arithmetic is conveyed, not merely dependent upon mental calculation, but worked out in practice by the same manner as by a person possessed of sight. The first four rules are known to the majority of the pupils, and some of them have advanced as far as decimal fractions.

"By means of raised maps, in which the principal cities, rivers, and seas are made perceptible to the touch, the interesting stores of geography are communicated to nearly the same extent as these would be taught in an efficient school for seeing children of the same class.

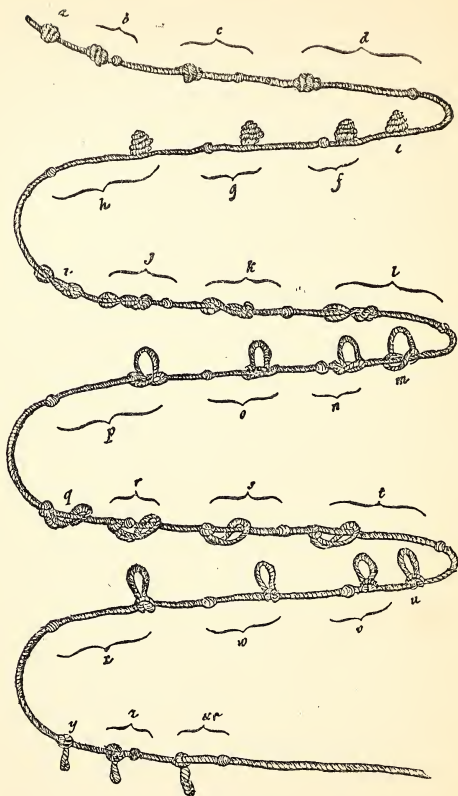
“By another ingenious apparatus they are enabled to communicate their thoughts in writing. Two methods are adopted for the accomplishment of this—one which makes them acquainted, by means of raised copies, with the ordinary English letters, which can, however, only be deciphered by persons having sight; no great dexterity can be acquired in this way, but sufficient for all purposes of ordinary communication. The other is more especially adapted for the written intercourse of the blind with the blind, being carried out by means of raised characters.”

In the prospectus of an Edinburgh Dame School intended for blind children “belonging to the upper classes of society” published in 1837, it is stated that the pupils will learn reading, writing, grammar, arithmetic, book-keeping, algebra, geometry, geography, history, philosophy, languages and music, according to their age and capacity. The twentieth century will find it hard to go one better than this.

As a contrast, take a more convincing statement of a pupil's life in the **Glasgow Asylum** in 1838: “The boys from ten to sixteen years of age reside in the establishment, and during the time they are not attending their classes (sufficient time for recreation being allowed) they are employed in making nets for wall-trees, sewing sacks and such work as they are found capable of doing till their education is finished and they have attained sufficient strength to be put to regular trades in the Asylum.” This throws light on the internal economy of the institution and also reveals an attitude to education which although it

may still be common, no longer prevails in the minds of the Alstons of to-day. Education was the attainment of a certain degree of tactual acuteness and the acquisition of a quantum of information—the names of the Kings of Israel, the lengths of the chief rivers of the globe and several other categories of facts all equally unconnected with the growing and developing nature of the young.

Apart from the various systems of embossed type which will demand fuller consideration there are a few pieces of school apparatus which may be noticed here. One of the most ingenious methods of conveying information without word of mouth was the string alphabet. The idea of a string alphabet is said by Dr Armitage to have come from Peru and by Miss Scott to have been an importation from Mexico, but with regard to the alphabet actually used in Britain its origin is attributed by contemporary writers to David Macbeath and Robert Miller of Edinburgh. It is difficult to believe that this invention was ever anything more than a curiosity, but assurances are solemnly given that it was regularly used in several schools, and Alston gives a full and clear description of its convolutions which, in the interests of archæology, is deserving of reproduction: "The string alphabet is formed by so knotting a cord that the protuberances made upon it may be qualified by their shape, size, and situation, for signifying the elements of language. The letters of this alphabet are distributed into seven classes, which are distinguished by certain knots or other



String Alphabet

marks; each class comprehends four letters, except the last, which comprehends but two. The first, or A class, is distinguished by a large round knot; the second, or E class, by a knot projecting from the line; the third, or I class, by the series of links vulgarly called the 'drummer's-plait'; the fourth, or M class, by a simple noose; the fifth, or Q class, by a noose with a line drawn through it; the sixth, or U class, by a twisted noose. The first letter of each class is denoted by the simple characteristic of its respective class; the second by the characteristic, and a common knot close to it; the third by a characteristic, and a common knot half an inch from it; and the fourth by the characteristic, and a common knot an inch from it. Thus A is simply a large round knot; B is a large round knot, with a common knot close to it; C is a large round knot, with a common knot half an inch from it; and D is a large round knot, with a common knot an inch from it, and so on. The alphabet above described is found by experience to answer completely the purpose for which it was invented. In this alphabet, the greater part of the Gospel of Mark, and the 119th Psalm, and other passages of Scripture, and historical works have been executed. The string is wound round a horizontal revolving frame, and passes from the reader as he proceeds."

In geography, as the extract given on page 28 shows, embossed maps and globes were used. **Glasgow Institution** had a globe that weighed $2\frac{1}{2}$ cwt., and other schools had smaller editions of the same apparatus.

In this the outside educational world is again evident, for these were the days when "the use of globes" was a necessary accomplishment and Herbertson and Fleure had not yet been born. Nowadays geography is taught for its intimate connection with man's story on the planet, but in 1837 its inclusion in the curriculum of a school for the blind was justified on the grounds that it added to the stock of knowledge, that it introduced variety and that it cultivated the sense of touch.

Alston's description of one of the pieces of geographical apparatus is interesting both in itself and for the high value placed on what to-day would be considered informative lumber :

"A rectangular board contains a representation in relief of the comparative lengths of the principal rivers in the world, reckoning from the Forth and Clyde up to the mighty Amazon. From the knotted cords appended below the mouth of each river, the blind are enabled to read the names of the rivers, the places of their rise and termination, and their lengths in miles. The principal towns on the rivers are denoted by small brass knobs. Upon the same board a method is adopted for enabling the blind to acquire, by the sense of touch, a correct idea of the relative bulk of the different political divisions of the earth. The countries are represented by elevated squares, the comparative areas of which correspond with those of the countries; and their numerical areas, as well as their respective populations, are also expressed upon knotted cords."

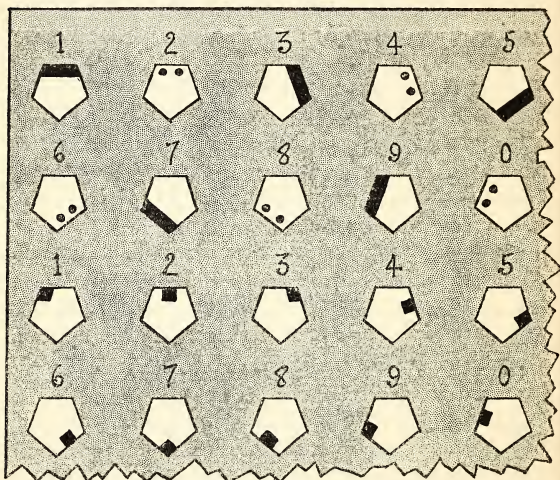
It is somewhat disconcerting though, after all, not

surprising to find that the most acute of contemporary chroniclers, the Abbé Carton of Bruges, says without apology or preamble, "Very little time is lost in explaining to the pupils these beautiful objects scientifically, and in general all these articles and machines are considered, even in the Institutions, rather as being curious than useful."

Tangible arithmetic has usually been effected by means of a board and pegs or pins. A large number of notes, arranged in rows, were cut in the board, and into these the pegs were placed in varying positions. In the earliest apparatus used in the schools the holes were square. Two pegs were employed, and as these had differing ends, sixteen signs could be obtained. Its inventor, David Macbeath of Edinburgh, made no use of the six additional signs, but the ingenious Mr Taylor of York afterwards utilised them to express plus, minus and the letters w, x, y, and z. In this way he found the board serviceable for algebra. William Long, who had been one of Macbeath's pupils and had secured a post as teacher in **Glasgow Asylum**, carried Macbeath's invention an important step further by making the hole pentagonal. Two pegs were still employed and the next advance came when one peg was found to be sufficient to express all the numerals.

There seems to have been two varieties of peg. These are shown on page 30. The first is that described by Abbé Carton in 1838. One end had a bar projection along one side, and was used to represent the even numbers 2, 4, 6, 8 and the cipher.

The other end had two dots along one side and was used to represent the odd numbers. The resemblance between this peg and the square type of the Taylor octagonal board is marked, and it is surprising to note

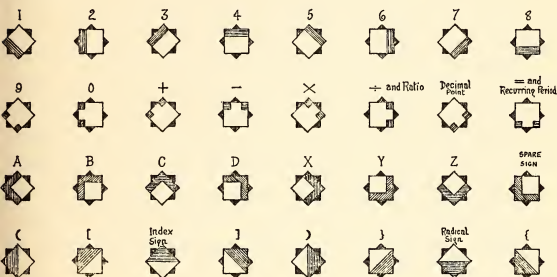


Pentagonal Board and Pegs

that the peg most commonly used in this country for the thirty years following the date above mentioned was somewhat of a retrogression. This is shown in lines three and four of the illustration. It had a projection at each end. One end had this projection in the middle of a side and was used for the even

numbers. The other end had the projection on a corner and was used to represent 1, 3, 5, 7, and 9.

The pentagonal board was superseded by one designed by the Rev. William Taylor, of whom more will be heard later. This is not characteristic of early days, but as it has been in use for nearly half a century a few words of description here may not be out of



Taylor Frame with Arithmetic and Algebra Type

place. The holes are star-shaped and the pegs square. Each peg has a bar projection at one end and a two-dot projection at the other. Eight different positions are possible, and this when both ends are used gives the ten numerals and six positions which are utilised for the signs denoting the simple operations of addition, subtraction, multiplication and division, the decimal point and the relationship of equality.

In those early days the classes had not separate rooms but were taught in one large bare apartment

with one teacher in charge and several monitors. The teacher could not usually boast of any special pedagogical qualifications. So long as he was honest, intelligent and, what was highly prized, a firm disciplinarian, he was considered equal to the occasion. He might be a small shopkeeper who wanted to relinquish the hazards of trade for safety and a competence, or he might be attracted from the staff of a national school by the call of the special work. He was expected to be generally useful to the institution as a whole, and might be called away from his teaching several times in a morning to attend to other bits of his work. It was a system under which the smart pupil made progress while the dullard accepted frequent tribulation as the inevitable consequence of his dullness and, in moments of resignation, as a fair exchange for successfully evading the toils of acquisition.

As has been already shown, most of the institutions contained both children and adults, and no special attempt was made to keep them separate. At meals and throughout their leisure they would be together and hold a community of ideas no longer thought desirable.

The ideal of normality was not insisted upon. Mannerisms of speech, carriage and behaviour were not so ruthlessly eliminated as they are to-day. On at least one occasion it is recorded that the inmates of an institution were taken out like a party of rock climbers, united by a rope. Much more recently in

vogue was the "crocodile," wherein each youngster laid his hand on the shoulder of the one in front. In extenuation, it should be remembered that the inclusion of partially blind children, so useful as guides, is of recent date.

Life must have been dull, indeed, in these intensely laudable institutions. The prescribed relaxation of the pupils was the reading of the Bible in type that was an exasperation to the spirit. Here is the description of a Sunday in 1838: "After breakfast and before the inmates prepare for Church, they are assembled in the School-room when one of the blind reads a chapter of the Bible and each boy and girl repeats a Psalm or Hymn. Afterwards they are attended to Church. In the evening each has his book. It is most encouraging to perceive with what care the pupils acquire the task assigned them. They will repeat six, eight and twelve verses with great correctness. At the hour fixed, they all assemble in the School-room before the teacher and repeat the task which they have learned. Afterwards they read a chapter and close the exercises with prayers. At eight o'clock they retire to bed."

Resignation and a proper spirit of gratitude for benefits received were the mental postures most highly in favour with the management. "We shall take particular care," wrote Valentin Haüy in 1786, "to join in their library works equally fitted to form the heart and cultivate the mind, in fixing as the basis of their studies the most essential of all studies, that of

religion. By the assistance of such principles we shall inculcate the love of duty and, in particular, of gratitude towards their benefactors." This is the keynote of the British institutions for the best part of a century after Haüy's words saw the light.

It is always dangerous, however, to go too far in generalisation. Here is the contrasted account of another school, as it appeared to a visitor in 1833: "In the **Institution des Jeunes Aveugles** there are one hundred of these interesting beings (between the ages of ten and fourteen), and a more delightful spectacle cannot be imagined than a view of its interior. You see not there the listless, helpless blind man, dozing away his days in a chimney nook, or groping his uncertain way about the house; but you hear the hum of busy voices,—you see the workshops filled with active boys, learning their grades from others as blind as themselves,—you see the schoolroom crowded with eager listeners, taught by blind teachers. When they take their books, you see the awakened intellect gleam from their smiling faces, and, as they pass their fingers rapidly over the leaves, their varying countenances bespeak the varying emotions which the words of the author awaken. When the bell rings, they start away to the play-ground,—run along the alleys at full speed,—chase, overtake, and tumble each other about,—and shout and laugh and caper round with all the careless heartfelt glee of boyhood. But a richer treat and better sport awaits them; the bell again strikes, and away they all hurry to the hall of

O Dieu
votre paro
votre cœur,
mien, en me
prêtre vous
vire: je vous

Valentin Haüy type for beginners.

music; each one brings his instrument, and takes his place; they are all there—the soft flute and the shrill fife—the hautboy and horn—the cymbal and drum—with clarionet, viol, and violin;—and now they roll forth their volume of sweet sounds, and the singers, treble, bass, and tenor, striking in with exact harmony, swell it into one loud hymn of gratitude and joy, which are displayed in the rapturous thrill of their voices, and painted in the glowing enthusiasm of their animated countenances.” Unfortunately this is all rather subjective but it certainly bears witness to the happy tone of the school. Pleasure is relative, and though the youngster of to-day would prefer his own conditions to those of a hundred years ago, the pupils of those days must have had their blissful moments and wild thrills of delight from experiences which a modern child would consider merely boring. Institutions would vary—the personal factor of the master and matron would count for much, and within the limits of the system a wide latitude would certainly be found. This again is just a reflection of the world outside. It was a time in which it behoved everyone to conduct himself according to the station in which a Divine Providence had placed him. The standards of behaviour demanded by public opinion varied according to the stratum of society in which the individual had his being. There was one standard for the courts of George IV. and William, another for the squirearchy and still another for the product of the Charity School. There were few precepts of conduct which were common to all.

Each moved in the orbit of its own order. If here and there the poor were kindly treated it was because of the magnanimity of the philanthropic, not because they had any right to it. The dawning consciousness of social justice as a right rather than as a condescension is exemplified in the bitter feud between John Bright and the Earl of Shaftesbury. That contention illumines the mid-nineteenth century attitude to those in lowly station and so should not be ignored by those who would understand the social atmosphere of the schools for the blind during the first half century or so of their existence.

Heureux enfans !
peut-on dire aujour-
d'hui avec confiance
aux aveugles, vous se-
rez donc consolés !
vous ne serez plus ,
comme autrefois, re-
poussés par vos sem-
blables, et considérés
comme une espèce d'é-

Valentin Haüy type for advanced readers.

CHAPTER III

AN OLD-TIME CONTROVERSY

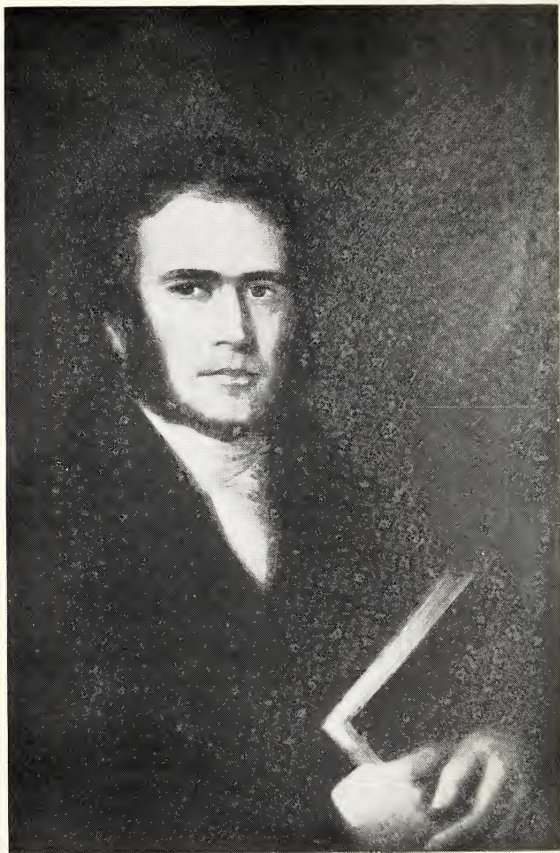
IN the description of his aims and methods which Valentin Haüy published in 1786, he states quite frankly that the idea of embossed printing was very old and that his contribution was not so much that of inventing as of turning the invention to the use of the blind. Anyone who is acquainted with the usual processes of printing, he says, will remember how the damp paper comes off the machine deeply embossed on the back of the sheet by the pressure of the type. If the type were made in the form of the actual letters instead of being reversed, this raised printing would be on the lower side of the paper—while the print on the side struck by the type would be reversed. Haüy had an italic fount made in this way and was satisfied with its legibility to the fingers. The pupils were taught sufficient compositing to set up their own books and many special bits of apparatus were invented for this purpose by Haüy and his friends, among whom he had the good fortune to number M. Clousier, the King's Printer. The pages were printed on one side only and before being bound were pasted back-to-back.

In the little essay above mentioned Haüy admits that his books are bulky, and to meet this drawback

he started on the elaboration of a code of contractions and abbreviations. In addition he expected to be able to cut down the size of his books, by gradually reducing his type, as the tactile acuity of the blind improved.

Haüy also taught his pupils to write ordinary script. His method seems to have been to write it backwards with a stiff unsplit steel pen on thick paper. The writing was by this means embossed on the under side of the sheet.

Some of Haüy's books were brought to England in 1823 by Lady Elizabeth Lowther for her blind son, who straightway procured similar types and, with the help of a servant, printed off for his own use the Gospel of St Matthew. No British School, however, took kindly to the round italic type. On the other hand, Haüy's general propositions were accepted and his methods followed by the most successful experimenters of the next generation. The Paris School made no improvements on Haüy's original efforts. Research and experimentation were confined to Britain and America. The question of the best type for the blind was then a familiar one in the discussions of learned societies, and a surprising number of systems were evolved. Attention may, with advantage, be focussed on 1832. In that year the Edinburgh Society of Arts offered one of its prizes for the best type, and Mr Alexander Hay, a blind man of Edinburgh, was successful with an arbitrary system. Six competitors entered. The Society felt that the matter needed further investigation, and instead of recommending



Rev. William Taylor.

Hay's type for universal adoption it offered its gold medal for the following year and made the competition widely known. Fifteen competitors entered, and in view of the inveterate preference given to Roman type for many years to come it is interesting to note that twelve of the fifteen were arbitrary systems. Each entrant had to forward a memorandum, and some of the inventors stated the claims of touch as against sight in language that could not be bettered with all the experience of to-day. Mungo Panton, one of the competitors, writes in defence of his arbitrary character: "The blind alphabet ought to be easy to learn, easily impressed on the memory and quickly read by the finger. It is generally admitted that the character most used by those who can see does not comply with these conditions and that to adopt it in order to spare the friends of the blind the difficulty of learning another is to sacrifice the interest of the blind to the indolence of those who enjoy their sight." And a little lower he says, "Therefore I believe that in the choice of an alphabet for the blind it is necessary to try to ascertain which is the form required by the sense of touch rather than to try and preserve some resemblance to known characters."

At this time the leader of thought in the blind world was the Rev. William Taylor, F.R.S. When the Edinburgh Society turned its attention to literature for the blind he was one of the Canons Choral of York Minster and had come into contact with blind affairs by serving as tutor to Sir Charles Lowther, to whom

reference has already been made. He became, in 1835, the first Superintendent of the **Wilberforce Memorial School** and did much to organise the work there on sound lines. In 1845 he was translated to Worcester. In 1866 he assisted in the founding of the **College for the Blind Sons of Gentlemen**, and two years later he set on foot the **Society for Providing Cheap Literature for the Blind**. He died in 1870.

To this authority the Edinburgh Society appealed for his opinion on the systems submitted. Taylor reported in favour of a plain Roman capital sent in by a Dr Fry of London. The society accepted his recommendation and awarded its gold medal accordingly. Five years later Taylor contributed a paper to the British Association and repeated his strong preference for a type that was as legible to the eye as to the finger.

The arguments which for fifty years saddled the blind of two hemispheres with the sad results of a wrong choice do not now carry conviction, but they had a show of reason not always granted them to-day. It is proverbially easy to be wise after the event. It has been already said that the propositions enunciated by Haüy were accepted by those who came after him, and this is nowhere more clearly the case than in his dictum with regard to type in which he laid it down that any system proposed for the use of the blind must be readily legible to the eye.

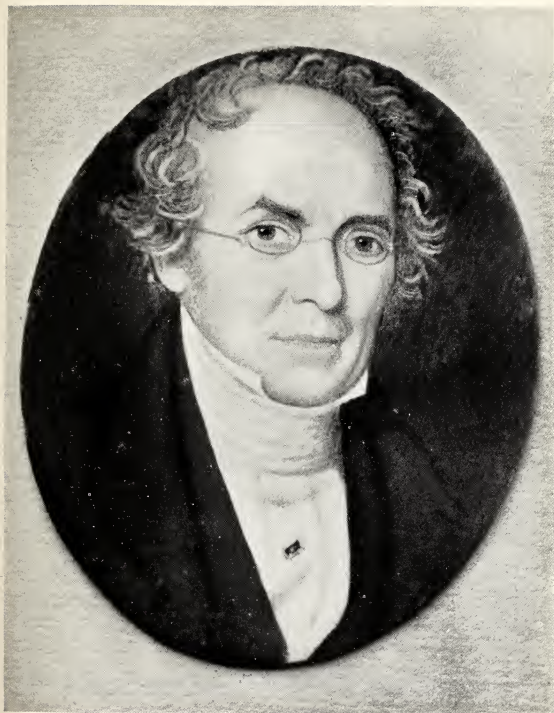
James Gall of Edinburgh, an inventor about whom more will be said shortly, elaborates this idea in many

pages of his voluminous works. In one such passage he says, "No one but professed teachers of the blind would in all probability ever attempt to learn an arbitrary system. This would be a most serious disadvantage to a literature which is intended not merely for blind asylums, but for every parlour and cottage where there is a person blind." The "professed teachers of the blind" did not bulk large in Gall's mind. He knew that the blind were illiterate and that they were for the most part scattered in units up and down the country. He pictured some fond relative introducing the fingers of the blind to the character already well known to the eye. Every home that had a blind inmate would also house his teacher, so that all that was needed to secure a lettered blind population was to disseminate his volumes throughout the land. His imagination bore him on and he saw the blind student carrying one step further the good work by teaching in his turn the printed page to those of the home who could not read. "Roman letter," said a speaker in Glasgow in 1838, "has the peculiar advantage of being equally adapted to ordinary schools and of being similar to the letters which the blind may have learned before losing their sight."

It is not difficult to see that there was a right instinct underlying these arguments, although, as it happened, it led to the wrong turning. That instinct was the healthy desire to save the blind from an undue segregation. This danger is expressed in vivid terms by the Abbé Carton :

"The largest number of blind is found amongst the poor, and the greatest misfortune of the blind consists in their isolation. All our efforts should tend towards bringing them near to ourselves, and to make their education as like our own as possible, and to begin this education as quickly as may be, and not to think that a special institution is needed for teaching them to read. If the characters in their books are those which we teach to other children, ordinary schools will be able to admit from their infancy these unfortunate beings who have been hitherto kept afar off under a false pretext; and their misfortune will lie less heavily upon them, their intellect will be developed and the advantage they will derive from their stay in special establishments will be in harmony with what they will have learnt before entering them.

"Young blind people are very subject to low spirits because they are shut out from the occupations and games of other children. Always confined to the house, trained rather than guided, overwhelmed with careful but too often mistaken attentions, they are prevented from acquiring that confidence in themselves they ought to have; and, for fear of a fall or a slight hurt, their relatives do not let them know the place where they live and the objects surrounding them, which would be so great an advantage to them. If the young blind went to school with other children, they would take part in their games and would be strengthened by the exercise. They would be obliged to rely more on themselves; for from natural indifference the children who had their sight would often leave them to themselves, or would be satisfied to direct them



James Gall.

by words, which would be still better. Choosing the ordinary character would render all this possible, and the teaching of the blind would thus become as simple as that of others."

This sentiment was right but the deductions, being drawn from insufficient data, were wrong. The best way to prevent the undue isolation of the blind has been shown by experience to be to give them the machinery best adapted to their use and so enable them the more quickly and efficiently to keep abreast of the intellectual life around them. As Dr Armitage said, "A man is isolated by everything that renders the acquisition of knowledge difficult and tedious, and his isolation is diminished by everything that facilitates his power of self-education."

Of the many systems entered for the Society's prize and medal, all but two are now forgotten. The type which won the medal became with various slight modifications the leading system of Britain and America. That of Gall, who was also a competitor, is preserved mainly in the diffuse but interesting writings of its inventor. Although his system was never adopted to any great extent, these give the man and his labours a substance and reality which call for further mention.

Gall, who was a printer and had thus advantages for his researches, devoted himself with indefatigable ardour to this unusual sideline of his trade. In the wordy controversy that began, with his experiments, in the 'twenties, the Roman letter party although

triumphant were in a minority. Gall makes feeling references to the persuasions of his friends, who seem to have been, one and all, upholders of the arbitrary idea, and confesses that he found it wiser to carry out his Roman letter experiments almost in secret. His own convictions were unalterable. In his unregenerate days, it is true, he had invented an arbitrary system with a straight line and dot, but now he put such frivolities resolutely behind him and bent all his energies to the task of devising a Roman letter that should be at once readable to the eye and to the finger. Thus he gradually worked out an angular character which in defiance of his own doctrine departed in some instances so far from the original as to be barely recognisable. His admirable patience in experiment merited a greater measure of success than that which actually crowned his efforts. Setting aside his own estimate of his achievements, and it is plain that affection warped his judgment, the fact remains that although given a careful trial under his personal supervision in Edinburgh, Glasgow and London, his system failed to find general acceptance. As has been already shown, Gall was a strong supporter of a type that could be easily read by the eye, and it is an irony of circumstance that his own letter, as it departed more and more from the conventional alphabet in the course of his long-drawn-out experiments, failed the more to secure the suffrages of the schools. Alston, in fact, boldly calls Gall's angular character an arbitrary type, a reproach that must have been felt by his rival as the

OUR FATHER WHO
ART IN HEAVEN,
GOD, FOLLOWED BY
THY NAME. THY
KINGDOM COME.

OUR FATHER WHO
ART IN HEAVEN, GOD,
FOLLOWED BY THY NAME.
THY KINGDOM COME.
THY WILL BE
DONE IN EARTH, AS

OUR FATHER WHO
ART IN HEAVEN, GOD,
FOLLOWED BY THY NAME.
THY KINGDOM COME.
THY WILL BE
DONE IN EARTH, AS
IT IS IN HEAVEN. GIVE
US THIS DAY OUR DAILY
BREAD. FORGIVE US OUR
DEBTS AS WE FORGIVE OUR
DEBTORS.

Example of Gall's type in three sizes.

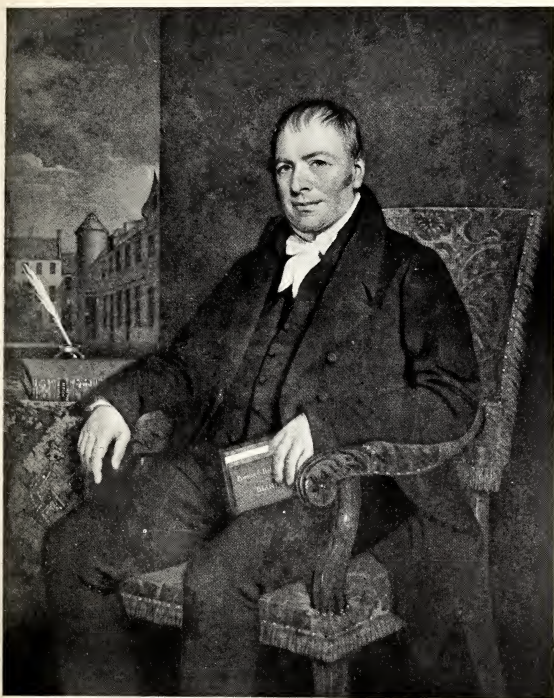
unkindest cut of all. Gall's first series of experiments were completed by 1827 and after several trial volumes the Gospel of St John was issued in 1834.

John Alston, the treasurer and leading figure of the **Glasgow Asylum**, was the chief exponent, printer and disseminator of Fry's type. The changes he made in the original type were minute and his system remained a simple Roman Capital. Gall's triangular alphabet and Lucas's stenographic system, which will be noticed shortly, were well known to him, and he deliberately set them aside on the familiar plea that the best type for the blind must be one easily read by the seeing.

In 1836 he made an appeal for a special printing fund so that the expense of embossing his books should not fall on the institution resources, and in January 1837 his press began to function. The work was prosecuted with such energy that by 1840 the embossing of the Scriptures was completed and copies were sent far and wide. The size chosen after much experiment was Great Primer but Alston admitted that this might be too small for coarsened fingers and printed some works in Double Pica for older readers. He made his first missionary journey round the English Institutions in May 1837, and says that he found scarce ten persons who knew letters. After his third and last expedition, he is able to state that "now there are some hundreds who can read our books most distinctly, from the child of eight to adults of upwards of sixty." He secured its adoption in **St George's** (London) and

Norwich. Good news came from the institution at Philadelphia, which wrote to congratulate him on his system and to say that they had begun to turn out books according to his plan. The advantage of being able to share the products of their respective presses was mentioned, and in 1838 Alston in high spirits despatched a large consignment of his volumes across the Atlantic. It is not reading too much between the lines to detect a suspicion of triumphant rivalry in the following newspaper report of 10th May 1838. The pupils of the **Glasgow Asylum** had been giving proofs of their dexterity and the concluding test is described as follows: "Mr Alston broke up the seals of a parcel and produced printed copies of Locke's *Opinion of the Bible* which had been thrown off from the Institution Press and retained under seal in order that they might be submitted to the blind for the first time at the meeting. This was accordingly done. The children were put upon their mettle for the honour of being allowed to read it, and a girl, having rapidly fingered the words, announced that she was ready to read it to the audience with perfect ease."

"The perfect ease" should be accepted with a grain of salt but it is undeniable that the Roman letter became the most widespread system throughout the country. Thirty years later, when Dr Armitage and his blind friends were weighing up the respective merits of the various systems, it was found that all were proficient in this system while the other methods were known only to one or two.



Bailie John Alston.

Readers south of the Tweed had not to depend entirely on Glasgow for their reading in Roman letter. Funds were raised for its output in different parts of England. Taylor started printing in York with a capital letter type and later with a capital and small letter type. This press continued to function under the direction of William Littledale, a blind man who succeeded Taylor as Superintendent.

The publications which Taylor issued from his printing house at Worcester, of which mention has already been made, were in two sizes to meet the respective needs of the hard-handed and the educated reader. A London firm of printers named J. E. Taylor & Co., produced several books in Roman type in 1854 for the **Bristol Asylum**, and about the same time a fund was raised by **St George's** for an issue in Alston. The differences which can be noted in the work of these various presses are slight and negligible. Finally, there is on record a series of publications from Cheltenham by a man named Mitford which were in Roman type but with the letters placed vertically.

Thomas M. Lucas was a citizen of Bristol who in 1830 opened a school for a few blind children in his own town. In 1837 he came to London to gain further adherents to the system he had invented. He was then an old man of 73, and the strain of his propagandist labours, coupled with the worry of a fierce controversy with Frere, proved too much for his strength. He died in the same year, but a

society known as the **London Society for Teaching the Blind to Read** was formed to carry on his work.

Lucas's enthusiasm and conviction were contagious and were worthily maintained by those who took up the task. They proudly set themselves to make his system a universal medium for the blind. The society opened its school in Bloomsbury in 1838. It moved to its present quarters at Swiss Cottage in Hampstead ten years later. This was in furtherance of the first item of its threefold programme, the creation of a Metropolitan School. The other items were the establishment of branch schools and the printing and dissemination of books in Lucas type. The energy with which it carried out its purpose was remarkable and its labours had a great influence on the development of educational establishments for the blind. Indeed, although his work was largely posthumous, Lucas is entitled to rank with Taylor, Alston and Armitage as one of the foremost pioneers in the advancement of the lot of the blind.

The labours of Lucas would appear to have been stimulated by the preceding efforts of Gall and Alston. In an "advertisement" to an early specimen of his work there occurs the following paragraph: "About the time Mr Gall's alphabet was introduced, Lady Charlotte Erskine proposed to adopt an easier character, and at her request Mr Lucas of Bristol constructed [an alphabet] . . . composed of all the known simple characters in existence. Afterwards this expert



GLASGOW CATHEDRAL.
 CATHEDRAL, OR HIGH CHURCH,
 MOST SPLENDID EDIFICE,
 OF OUR ANCIENT ARCHITECTURE
 TO BE FOUND IN SCOTLAND,
 IN THE YEAR 1123, BY
 BISHOP OF GLASGOW, &c.

stenographer conceived the happy idea of teaching the blind to read by means of stenography." An association was formed under the title of the **Bristol Society for embossing and circulating the Authorised Version of the Bible**. Its secretary was a Mr F. W. Reid and the books were embossed by Philip Rose & Son of Broadmead, Bristol. This enterprise was wound up in 1840 and the founts and other appliances moved to the premises of the **London Society**.

The elements of the Lucas character were the straight line, curve and dot, and the basis of the system was stenographic. Thus it differed from both Gall's and Alston's, which aimed at a more or less exact transcription of the ink-print version. Lucas's great idea was to convey the meaning by an abbreviated medium. He made a single letter stand for a word wherever possible, and as he says himself, his general rule was "to employ only those letters that will sound the word, omitting vowels when the word can be understood without them." Each letter of the alphabet stood for at least two words—*a* stood for *and* and *after*; *b* for *be* and *but*; *c* for *Christ* and *can*; *d* for *down* and *debt*; *e* for *ever* and *every*; *f* for *of* and *father*; *g* for *God* and *good*, and so on. Some words were represented by two letters—*ff* stood for *from*; *th* for *there* and *thee*; *sh* for *shall* and *shalt*; *ph* for *pharisee*; *gh* for *ghost*; *bl* for *blind*; *br* for *brother*; *gl* for *glory*, and so on.

The changes that were made in the system, and

these were many and long-continued, were carried out by a blind clergyman named J. W. Gowing who seems to have been as unwearied in his efforts as Gall himself. There is something pathetic about the Sisyphean labours of these pioneers, patiently perfecting systems which were not capable of perfection, and, with unquenchable zeal, seeking converts to media which were not deserving of propagation. It adds a touch of irony to the situation to reflect that before the society's first panegyric on Lucas was published, the Braille system was already ten years old.

It has been noted that the embossing of the Bible in Alston's type was completed in 1840. A version in Lucas was finished in 1853. The following extract from the *Fifteenth Annual Report of The London Society* reveals the devotion which the Board of Management felt towards "the incomparable Lucas," and the insinuating skill of their advocacy :

"The friends of the Society will rejoice to hear that their essential object, viz., the completion of the Bible on Lucas's system, has been accomplished, the last portion being now in the press. For fifteen years it has been the anxious wish of the Committee to attain this desirable object, and thus present to the blind the whole of the Word of God in that form of which the experience of many years has fully proved the practical superiority over all other systems for embossing.

"The facility of reading by means of Lucas's short-hand character renders it attainable to all classes of the blind, whether afflicted from their earliest infancy,



Lucas type.

or deprived of the blessing of sight at a later period of life; in the latter case, the sense of touch being necessarily less refined than in those who, from their youth, have depended so greatly upon it, they would have found it impossible, owing to the complication of strokes in the Roman letters, to read the Word of God for themselves by means of the alphabetic system.

"Indeed, even by those who possess a sensitive touch, and are gifted with superior intelligence, the Roman character cannot be read with fluency.

"It is natural for those who enjoy the blessing of sight to imagine that the Roman letters, with which they are so familiar, would be the easiest for the blind to learn; but many instances could be adduced of persons who have made the attempt of learning the Roman character, and given it up in despair, whilst they have found no such difficulty in mastering the simple shorthand of Lucas's system. In many cases, that which, on a practical view, appears theoretically correct, is not eventually found to be practically useful.

"The stenographic system, by contracting words into so small a space, enables the fingers to pass rapidly over a sentence, and thus bring a complete idea within the compass of a thought, so as to enable the blind to read with the same enjoyment as a person who possesses the blessing of sight.

"A wonderful proof of the facility with which Lucas's system can be read is afforded in the history of a clergyman, who having been, twelve years since, deprived of sight, attempted in vain to read by the common alphabetic characters, but, having acquired a knowledge of the stenographic system, now reads

with such fluency as to perform his ministerial duties without any assistance, conducting two whole services every Sunday with the same ease and comfort as if he were not deprived of sight. The completion of the embossed Bible is to him a peculiar boon, not only by facilitating his private study, but also by enabling him to read in public the appropriate church lessons throughout the year.

"A striking evidence of the superiority of the shorthand system is, that the Institution for the Blind, established at Paris in 1786 (the founder of which, M. Haüy, was the ingenious inventor of the raised alphabetic character), now prints its publications upon an arbitrary system, the pupils of the institution bearing testimony to its superiority. Another proof of its superiority, more especially with reference to the facility with which the blind may be taught Lucas's system (which is both arbitrary and stenographic), has been lately illustrated by the following fact: "A little peasant girl, only ten years of age, in the south of Devon, has taught her blind and aged grandfather to read for himself the Word of God. Having lost his sight during a campaign in Egypt forty years ago, living in an isolated spot, deprived of the instruction of others, the aged soldier esteems this acquisition a peculiar blessing in his old age."

Lucas type has been discussed with some fullness because it is important to remember the spirit of competition and controversy that marked the middle years of the last century. A further instance of this characteristic phase may be given. The school at Exeter, which had been opened as a branch of the

London Society and therefore as a rallying-point for Lucas, fell from grace at an early date and went over to the opposition camp of Alston. Alston himself, in a missionary tour of the kingdom, visited the town a few months later and confirmed the committee in the change. Two years brought about a recantation, and in spite of the blandishments of still another rival, Mr Frere, Lucas was re-instated. This is how the return of the prodigal is recorded in the annals of the **London Society**: "In the School at Exeter in which the Alphabetic system had been used for two years it was, after the fullest conviction of its inefficiency compared with Lucas, wholly relinquished on the determination of a special meeting when the superiority of the latter was completely established to the delight and gratification of the blind pupils themselves and to the entire satisfaction of the friends of the Institution."

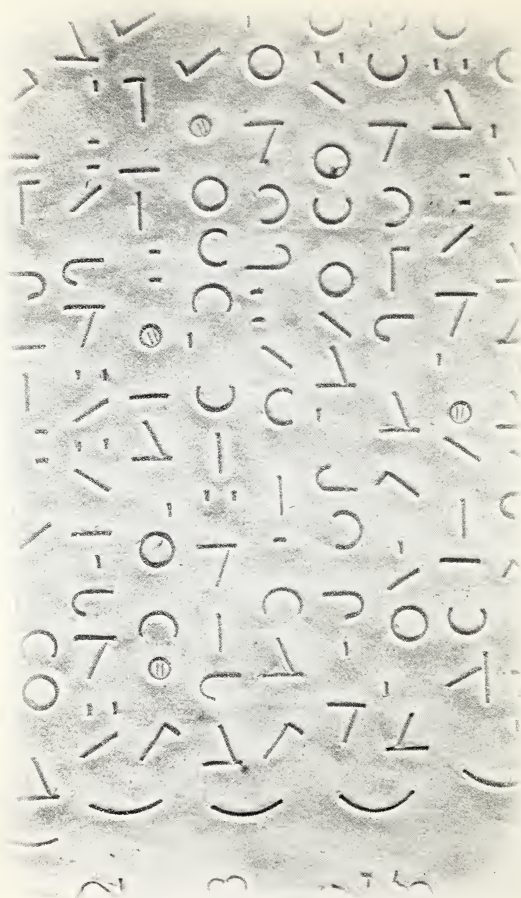
As already stated, single letters frequently stood for words in Lucas and ambiguities arose. This was aggravated by the fact that more than one word was represented by the same letter. Some signs, for instance, could be read in as many as eight different ways. The first sentence in St John's Gospel, for instance, was written thus:—in t bgini ws t wrd a t w ws w g, a t w ws g. Critics not unnaturally complained that too much was left to the intelligence of the reader. The interpretation of a symbol depended very much on the context and reading was in danger of degenerating into guess-work. Thus Lucas was more useful

when the matter to be read was familiar than when it was unknown. In the former case considerable fluency could be attained.

This applies in equal measure to the other shorthand system which appeared as the rival of Lucas in 1838—the phonetic system of James Hatley Frere. In that year the **London and Blackheath Association** was floated for the propagation of books in the new type, and during its short lifetime proved an aggressively militant body. Frere, who was himself blind, made use of a system of shorthand then in vogue known as Gurney's. It was phonetic and so differed from the principle underlying Lucas's method. Each word was embossed according to its pronunciation. "The names of the characters combined or sounded together give the word." Frere assisted the students of his plan by twelve rules in verse, of which the following couplet is the last :

"Whene'er the proper rule don't yield you satisfaction
On trial, you will find the word is a contraction."

As poetry this is bad and as a clear direction it is worse, yet the system earned a warm tribute from a competent judge in the person of Dr Armitage. "Frere's characters," he says, "are the neatest and most tangible of all that have ever been invented for the use of the blind. His return line is excellent but his total want of punctuation is a serious objection and his rules are too complicated. . . . To an educated reader well acquainted with the book he is reading



Example of Frere's type.

there is probably no system by which . . . reading can be accomplished with equal comfort and rapidity." The objections to the system were not always so well founded, and the following sentence, written in 1842 by the Superintendent of the **Exeter Institution**, shows that in those days any stone was considered good enough to throw at a rival system: "To the blind," said he, "who are very subject to affections of the chest, I fear that Frere's system would prove injurious from the extreme action of the lungs required to give articulation to the sounds." Overwhelmed by such reproaches the phonetic system withered away.

Moon is the one line system which survives from this period of typographical rivalry. Its inventor, William Moon, was born in 1818 and lost his sight partially at the age of 4, and completely at the age of 21. He was from the outset keenly interested in visiting the blind in their own homes and did much to establish Home Teaching Societies all over the country. "In the year 1840 when I became blind, I discovered with much regret that the arduous efforts of my good and zealous predecessors had failed to accomplish the object to which they had been directed. . . . I was led to investigate the causes of failure and to attempt the construction of a System of Reading adapted to all classes and capacities of the blind. By the Divine blessing upon my endeavours, I was enabled to project a plan embracing very Simple Characters for the Alphabet, which is composed principally of the Roman Letters in their original or in slightly

modified forms, combined with *Full Orthography*. Where I could not alter to advantage some of the more complex letters of the Roman Alphabet, I removed them altogether, and substituted new characters in their stead; and when the Alphabet was completed, it was found to consist of only *Nine* Characters of very simple formation placed in various positions."

Like Gall and Alston, Moon laid stress upon the advantage of having a type which could be easily read by the eye so that the relatives of the blind person might act as his teacher. His process of simplification, however, as he himself admits, led him, as it had led Gall, to depart so much from the Roman letter that his system is frequently classed as arbitrary. His plan was to take the ordinary letter, mostly Roman capitals but in a couple of instances from the lower case and simplify them so that they became "open and clear to the touch." Thus A was embossed without its cross bar, D without its front stroke, and so on. Many of the symbols such as those for E, K, M, P, Q, S and X bear no resemblance to their prototypes although the method of their derivation can be traced, and when explained to a pupil may help in the process of memorisation. The characters for G, H, R, W and Y are frankly arbitrary. Moon's printing was, like the other systems considered in this chapter, executed at first by means of movable types, but later, as was also done in the case of Lucas, a stereotyping process was adopted. This was by means of metal plates to which were soldered pieces of wire in the shapes of the

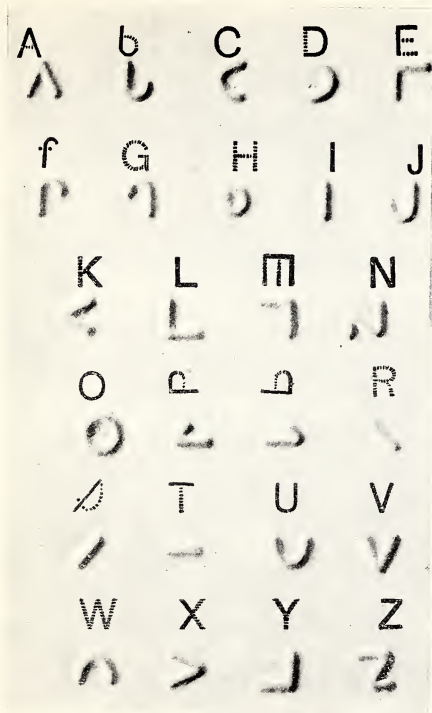
letters. It will be noted that in Moon the same character may be used to represent several letters according to its orientation. The semi-circle which stands for C is made to represent W, D or U according as it is turned through successive quadrants. The right angle which stands for E is made to represent M, Y and L when treated in a similar fashion. A third set of four is provided by an acute angle whose varying positions give the symbols for the letters A, X, V and K. A straight line in four positions stands for I, T, R and S, while a hook gives B, J, F and G. Lastly, a set of three, N, Z and a contraction for AND are furnished by a crooked line. Thus the twenty-six letters of the alphabet are represented by nine symbols when these are considered irrespective of their position, although of course there is no ambiguity when each is properly placed. One further feature of this system must be noted. Moon arranged that the reading finger should be guided by a bracket from one line to the next, each being read in alternate direction. This plan had already been followed by Frere, who, indeed, carried the idea one stage further by reversing the individual letters on the return line. Moon knew Frere's system well and had used it in his early home-teaching days, and there can be little doubt that he was indebted to it not only for the idea of the return line but for the shapes of several of his letters.

Moon's first book was printed in 1847. This is his own account: "Means were then required to prepare

books, etc., for the blind generally, in my system of embossed reading. After a lapse of two years, during which time I frequently sought Divine guidance and assistance, my prayers were answered. A Christian friend (the late Charles Rogers, Esq.) kindly gave me sufficient movable type to commence the work; and the first publications appeared in June, 1847, in the forms of a *Monthly Magazine* and *Devotional Extracts*."

For many years he carried on the work at his headquarters in Brighton and had the satisfaction of seeing its widespread adoption chiefly by **Home Teaching Societies** for use among adults, but also in schools for blind children. Moon died in 1894 but the work was carried on by his daughter until in 1914 the **Moon Society** became a branch of the **National Institute for the Blind**. The fact that Moon survived is in itself indicative of merit, and there is no doubt that for the aged and the horny-handed, the system is without an equal.

The comparative prices at which books in the competing types were sold are of some small antiquarian interest. The New Testament in Lucas type cost £1, 16s. od., in Alston, £2, and in Moon, £4, 17s. od. The Old Testament in Lucas cost £8, 18s. 4d., in Alston, £7, 15s. od., and in Moon, £13, 10s. od. This was in 1860.



Moon's type.

CHAPTER IV

THE TRIUMPH OF THE DOT

IT is a commonplace in pedagogy that youngsters fail to realise the origin of every-day necessities. In this lies their nearness to fairyland, for to them a railway train or motor car is as inexplicable as a flying carpet a flying carpet, as inevitable as a motor car. Men have more knowledge of mechanics but in many respects they are but children of a larger growth, and many of the inventions on which they lean most heavily are too much with them to create remark. In the world of the blind Braille is taken for granted. It is too fundamental to rouse comment. It ranks as one of those indispensable factors in existence which are above the region of question. The writ of Braille runs wherever blindness occurs. It has been adapted to every language on the planet. It has made practicable a normal curriculum in schools for the blind and has brought the method and outlook of these institutions into line with those for ordinary children. The **National Library's** collection of 150,000 volumes in this country is but one other manifestation of its influence. Yet the day is not remote when Braille had to fight for its right to live, had to join in the mêlée of contending types and called upon its head the uncompromising strictures

of those who thought they knew what was best for the blind.

Louis Braille was the son of a harness-maker who lived at Coupvray, a village some twenty-three miles from Paris. He was born in 1809 and blinded himself at the age of three when playing with one of his father's awls. His parents were keenly interested in their son's welfare and had him entered at the famous **Jeunes Aveugles** in the year 1819. The school was then under the energetic direction of Dr Guillié and Braille made rapid progress with his studies. He learned to read on the Valentin Haüy letter, and, like other pupils of those days, lamented the lack of an embossed type which could be written. His scholarship was praiseworthy, while his character was strong and upright. He found favour in the eyes of the school authorities, and, at the age of seventeen, was made a junior master. He combined with his duties as teacher that of organist and held appointments at different times in various Paris churches. He seems to have been a hard worker and wrote several condensations of text-books for his pupils. The problem of how to get a system that could be written as well as read was constantly in his thoughts, and by the time he was twenty he had found the germ of what he sought. There was at that time in Paris an artillery officer called Charles Barbier who had devoted himself to the same problem, and who had worked out an arbitrary system which had three times received the commendation of the Academy of Sciences. He devised, as the basis of his scheme, a set of twelve



Louis Braille.

dots, six from top to bottom and two sideways. By varying the number and position of dots he was able to ring the changes on an enormous number of combinations. Of these, however, he only used thirty-six. In fact his machine was too elaborate for the work it had to do. End and means were not nicely balanced. The system was phonetic and Barbier from time to time made changes in it, which, as Carton says, rendered it more ingenious than rapid. His elaborations also put it outside the possibility of general use in schools. It is easy to picture young Braille poring over the needless intricacies and unexplored possibilities of Barbier's invention and seeking for the formula which should reduce it to simplicity. He felt that in the dot lay the secret of writing for the blind and that therefore in the dot was to be found the consummation of his quest. How the inspiration came is not known. Braille, unlike Gall, is silent on his experiments. It must be enough to grasp the triumphant fact that he succeeded. He cut Barbier's twelve-dot letter down to six and contented himself with a simple alphabetic arrangement. From four dots Braille found that he could get ten symbols, one with a single dot, one with all four, four with two and four with three. Ten was still a number to conjure with in France and Braille must have found this initial step full of happy augury. A second row of ten letters could be derived from the first by the addition of one of the bottom dots and a third line by the addition of both. This was more than sufficient for his alphabet and so the last five symbols of his third line were utilised for

accented letters while the handsome quota of thirty-two possible combinations was left over for punctuation marks and contractions. A conception so brilliant and yet so simple makes one wonder that nobody had thought of it before, but such an impression is deceptive. The same might be said of Newton's laws of motion, or of many another conquest by the mind of man. The path is unmistakable when once illumined by the light of genius. It is not easy to detect any plan in the construction of Braille's first ten letters. The single dot is probably the choice that most experimenters would have made for a beginning and the same might be said for the next two letters. *D* is the first divergence from the expected for it would have been natural to have come next to the remaining combinations of two dots. Instead of this, a three-dot symbol stands for the fourth letter and then a return is made to a two-dot combination. The only generalisation that can be extracted is that Braille first exhausted the symbols that included dot 1 before proceeding to the two which were without it. This is slight and of no importance, and it may well have been that the selection of the primary symbols was, like the system itself, arbitrary.

Braille first made his invention known to his own school in 1829 and brought out an amended and expanded version in 1834. He was granted leave to teach it in his spare time to the scholars of the **Jeunes Aveugles** but the school did not adopt it as its official medium till 1854. By that time its inventor had been

A	B	C	D	E	F	G	H	I	J
•	;	”	”	”	”	”	”	”	”
K	L	M	N	O	P	Q	R	S	T
•	;	”	”	”	”	”	”	”	”
U	V	X	Y	Z	ç	é	à	è	ô
•	;	”	”	”	”	”	”	”	”
an	in	on	un	eu	ou	oi	ch	gn	ill ^w
•	;	”	”	”	”	”	”	”	”
?	î	:	.	?	!	(	«	×	×
•	;	”	”	”	”	”	”	”	”

THE ORIGINAL FRENCH ALPHABET.

Original French Alphabet.

dead two years. Braille proved that a dot was more legible than a line system, and it is interesting to observe that Gall and other experimenters had discovered the same fact for themselves although they were unable to break away sufficiently from their *a priori* reasoning to make full use of it. They found that the triangular letter and the Roman letter, too, were more effective when made in dots than in continuous lines, and Gall's latest books were printed in this manner. Some of the Continental embossers of Roman type also utilised the serrated letter, and thereby added to speed and ease of legibility. The idea was not derived from Braille but from their own mechanism for writing. This was hardly writing, but a kind of home-made printing with wooden types. These represented the letters of the alphabet by series of pin points. When such a type was pushed into paper it formed a dotted letter on the under side. Readers doubtless found that they approved this style of letter and their preference had its reaction on the printing press.

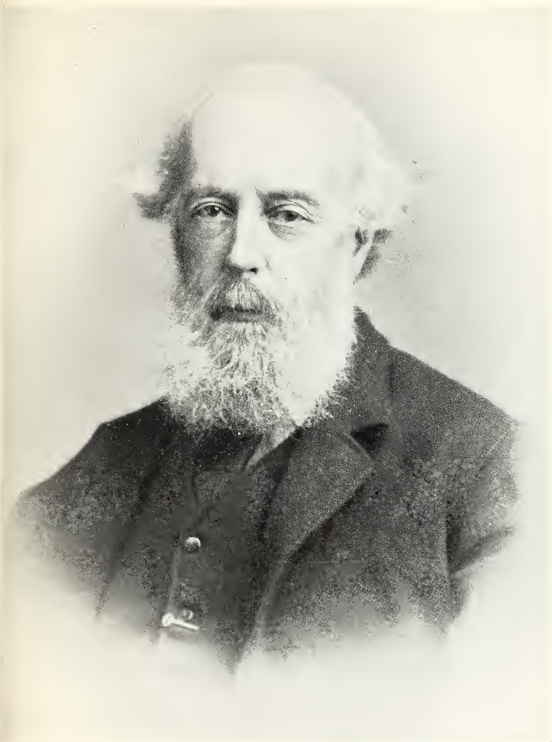
Braille's system excelled all others in its easy legibility, but its chief merit lay in the fact that it could be written. The writing, too, could be done rapidly and without undue difficulty. This gave it a place among the competing types but, as has been seen in the previous chapter, the question was not judged on its merits, but predetermined on the dictum that the best type must be readily legible to the eye. Arbitrary was an epithet of condemnation which could not be

denied to Braille. The Abbé Carton of Bruges was the only man who ever fancied that there was some resemblance between Braille and ordinary print.

It was forty years after its invention that Dr Armitage, the great missionary of Braille, began his work second only in importance to that of Braille himself. Dr Armitage had bad sight, depended on his fingers for his own reading, and was an implacable rebel against the prevailing doctrine that matters tactile should be judged by the eye.

He gathered round him a band of disinterested and leisured blind men and set about the task of deciding which of all the available types was the fittest to survive. "The members of the Executive Committee [of the **British and Foreign Blind Association**] were blind," says Dr Armitage, "or so nearly so as to be obliged to rely on the sense of touch, and not on that of sight, for the purpose of reading. Most members were also able to read at least three systems of raised letters by touch, and were not pecuniarily interested in any. Some were able to read by every known system, except when, from the extreme smallness of the type, there existed a physical impossibility. They took care themselves to use extensively the methods which seemed to promise well, and they carefully noted the views and wishes of all the intelligent blind within their reach.

"Several members had very extensive experience in teaching among the ignorant and aged, as well as among the more intelligent and young. They



Thomas Rhodes Armitage.

approached their work with various views, according to their greater or less previous acquaintance with the subject, but with the determination to spare no pains in arriving at the truth. In order to make use of much valuable information thus attainable, the council, at an early period of its labours, requested the attendance of all the intelligent blind within their reach. They took much pains to ascertain exactly their views, and the reasons for the opinions they held. This evidence was carefully noted down at the time and read over to the blind person under examination. At the commencement of each examination the witness was asked by what systems he could read, and books in these systems were then given to him to test his ability. He was only allowed to give evidence upon those systems with which he could thus prove himself to have a practical acquaintance. The information thus obtained was of great value, as it represented a sort of public opinion among those of the blind who had paid attention to this subject."

This was in 1868, and the result of the assize was a unanimous verdict in favour of Braille. Thereafter Armitage set himself to the task of popularising the point system in the schools of his own and other countries. He pleaded the cause of Braille at the first conference ever held of teachers and friends of the blind. This was in Vienna in 1873. The result can best be given in Armitage's own words: "The subject was referred to a committee, and at the next congress, held in 1876 in Dresden, it was decided to adopt a

modified Braille, in which, though the Braille frame was retained, the letters were altered in such a way that those letters which occurred most frequently in the German language were represented by the fewest points. The most experienced of the German teachers strongly objected to this decision, and it was reversed at the congress held in Berlin in 1879, which recommended the old Braille system for universal adoption. This was confirmed at the congress held in Frankfort in 1882."

When Armitage began his campaign in 1868 there was, he says, not a single institution in the United Kingdom in which the Braille system was used, and the number of individuals who knew it probably did not exceed twenty. By 1882 he was able to write "There is now probably no Institution in the civilized world where Braille is not used except in some of those in North America." Without Armitage's great personal influence and tireless pertinacity in what he knew to be a cause of fundamental importance to the blind, it is certain that many years more would have elapsed before Braille was generally adopted. Even as it was the quotation above given probably strained the truth. In 1883 the schools and institutions of Britain in reply to a questionnaire gave thirty-five as using Moon as their official system, and only twenty-seven as using Braille. This is more in line with Dr Armitage's own complaint at York in the same year that only three British institutions were making a large use of the Braille books and writing frames

Arma virumquecano Troiaeque Pri
 Italian, fatis profucus, Lavinia veni
 Litora. Multum ille et terris Jactat
 Vi superum, seque memorem Junon
 Multa quodque et bello passus, dum
 Inferretque deos Laio: genus unde
 Albanique patres, atque aliae moenib
 Musae, mihi causas memorat, quo r
 Quicquid dolens reginae deum tot volve
 Insignem pietate virum, tot adire lab
 fuit. Tantaene animae caecitas

produced by his association. A number of years had still to elapse before Braille attained the position of an exclusive medium.

Armitage's mention of the schools in North America makes it desirable at this stage to glance at the development of embossed methods in that continent, more particularly as that development brought into the field a derivative of Braille which proved the most formidable rival that that system had yet known. In the early days of the American institutions Roman type was the only system. There were two or three variations of Alston's letter. One was printed by Dr Howe and known as the Boston type. This was an angular lower-case letter. Dr Friedlander of Philadelphia used a capital letter and the **Virginia School** issued books in a type which included both capitals and small letters as in ordinary print. In 1871 the **National Printing House** at Louisville was still turning out books in the angular Howe type but with capitals added.

The **Missouri School** at St Louis was the only one which showed any favour to British Braille, and this, at least in its early days, was not identical with the orthodox version. America was isolated from Europe by a high tariff which prevented the importation of books and apparatus. The first real break in the monopoly of the Roman letter came in 1869 when Dr Russ of New York brought out a dot system which he contended was without the chief faults of Braille. He considered it a mistake in Braille that the letters

were constructed without regard to their frequency of occurrence in ordinary literature. For instance the letter *t* occurs more often than *k*, and yet as it has twice as many dots it must take longer to write. His second objection was that each letter in Braille occupied the same space. The letter *a*, for instance, which has only one dot, takes up as much room as *q* or *y*, which have each five dots. Russ avoided these features by arranging his alphabet in accordance with "frequency," and by having what he termed a variable base. His system was two dots high, and none of his letters exceeded three dots in width though his contractions ran to four. The two characteristics of frequency and variable base gave the system an economy of space which, it was contended, amounted to as much as 30 per cent. Dr Russ passed on his adaptation to Mr Wait, who had become Principal of the **New York Institution** in 1863, and found in him an enthusiastic advocate. Wait was a man of strong personality and became as energetic in America for New York Point as Armitage was in Europe for Braille. Inter-Institutional rivalry, however, was not unknown across the Atlantic, and Mr Anagnos, the son-in-law and successor of Dr Howe at Boston, refused to believe that any good thing could come out of New York. It was clear that the days of Roman type were numbered and that some point system was bound to come. Anagnos therefore allowed some members of his staff to make experiments in that direction. The result was another variation of Braille—a variation

And join with thee calm Peace,
Spare Fast, that oft with gods do
And hears the Muses in a ring
Aye round about Jove's Altar sit
And add to these retired Leisure
That in trim gardens takes his

Example of Roman type (from a volume printed at Worcester in 1874).

more closely akin to its original than New York Point but different enough to constitute it a new system and thus create another obstacle in the way of a universal type. Mr J. W. Smith, the head of the Tuning Department at **Perkins**, was its originator, and his suggestion was to retain the Braille cell but to plan his letters according to frequency of occurrence. "Modified Braille," as it was called, was adopted in 1879 in the institution of its birth, but for twenty years it made little headway against its New York rival which, under the strenuous apostleship of Mr Wait, had captured the Federal printing house at Louisville and sent its literature free to any school that asked for it.

Dr Armitage and his friends at the **British and Foreign Blind Association** were not unaware of these movements in America, and gave New York Point an exhaustive examination with the firm and disinterested resolve to adopt whole-heartedly the one which proved itself the better. Their trials lasted two years and ended in favour of Braille. The pros and cons are given in full in the second edition of Armitage's book but in the light of still more recent developments scarcely merit close consideration by the student of to-day.

The situation with regard to Braille remained very much the same till the end of the century. Armitage died in 1890, but the establishment in 1868 of the **British and Foreign Blind Association** had provided permanent machinery for the dissemination of Braille

books and writing frames. A printing press was opened at the school for the blind in Edinburgh in 1892, while the printing of the Scriptures was carried out by the **British and Foreign Bible Society**.

The **British and Foreign Blind Association** issued from time to time rules for the writing of Braille, but these were not always obeyed by their own stereotypists. It became generally felt that the time had come for a revision of the contractions and for a general standardising of practice both in writing and printing. The Association assumed an autocratic tone in the matter of revision. "The Council," they said, "reserve to themselves the right to decide what alterations, if any, they should recommend to the public." They bowed however to the general desire for revision and standardisation and appointed a sub-committee for the purpose under the Chairmanship of Dr (afterwards Sir) Washington Ranger. The Committee's Report was published in 1901, and was discussed at a conference held in London in the following year. It met with little support from the blind community, and the claim of the Association to act as an executive without responsibility to any electorate told still more heavily against it. A new Committee was appointed with greater claim to a representative character. This, under the name of the **British Braille Committee**, and the Chairmanship of the Rev. Arthur Taylor of the **Bible Society**, sat for more than two years, and presented its Report to the conference which met in Edinburgh in 1905. The Committee set out a revised

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Fraction-line sign Numeral sign Poetry sign Apostrophe and Abbreviation sign Hyphen

st ing ble ar com

Accent sign Capital or Decimal-point sign Letter sign Italic sign

form of Braille in two grades. Grade I. was uncontracted and Grade II. fully contracted and intended for general use. The alphabet was left unaltered and no radical change made in the method of contraction. The rules were as few and their expression as short and simple as possible. It has been frequently complained that the contractions are an aggregate of individual preferences rather than a set of scientific symbols, but in spite of this and other shortcomings the system as set forth in this Report still holds the field. A still more elaborately contracted Grade was adumbrated but this was not fully worked out when the Committee came to an end. It was completed later by several members for the **British and Foreign Blind Association**. A few books for students and other advanced readers are now printed in this form, known as Grade III.

CHAPTER V

THE BEGINNINGS OF CO-OPERATION

BEFORE the institutions had been many years at work hostile criticism began to be heard, not from the general public but from earnest workers among the blind, who felt that in some important respects the institutions were not justifying their existence. These strictures arose from a consideration of the non-success of the pupils in after-life. The institutions were content to give schooling and technical instruction without making any organised attempt to find their charges satisfactory employment either in shops or in their own homes. This had been pointed out as early as 1837 by Thomas Anderson in a strong plea for the wider adoption of the workshop as contrasted with the school or asylum system. Anderson had been manager of the **Edinburgh Asylum**, and, at the time of his pamphlet, was master of the school at York. In his Edinburgh days he had opposed Gall's efforts to make reading a prominent plank in schoolroom work and continued at York his stout defence of a utilitarian policy. The system in operation in the Scottish institutions found workshop places for practically all whom they trained, and, in this connection, Anderson quotes Dr Howe, the pioneer of the education of the blind in America, who said in

1833, after a tour of the European institutions, that "the Institution at Edinburgh is on the whole the best I saw in Europe. It comes nearer than any other the attainment of the great object of such Institutions, namely, enabling the inmates to support themselves by their own efforts."

His contrasted picture of the Paris School has already been referred to. Anderson censures the English organisations for following in the wake of Paris instead of ensuring the after-success of their pupils by workshop provision or by schemes of after-care. It should be noticed in passing that the Scottish system was itself not altogether above criticism. Like the English method, it failed to grapple with the blind population as a whole. The English institutions were not able to provide work for all whom they trained, while the Scottish workshops trained only such as they could hope to absorb as wage-earners. Thus the hiatus in Scotland came before, in England after, training, but in neither country were all the trainable and employable blind adequately catered for. This wider outlook was not evident in Anderson's day, and the contentions in his pamphlet were sound. His outspoken opinions, however, seem to have fallen on unheeding ears, and the percentage of self-supporting ex-pupils continued to be lamentably small. It was mainly a realisation of these deficiencies, a realisation made vivid and urgent to philanthropic natures by personal contact with the workless and dependent blind, that brought about, in the middle of the century, a new advance in

the amelioration of their lot. Censure in such matters is of little value unless it has a constructive side, but this was not lacking, and out of dissatisfaction came a forward move of great importance. As in the case of the institutions themselves, this can only be followed by looking at individual enterprises in widely separated localities. The two most conspicuous examples are those which led to the foundation of the workshops in Tottenham Court Road, London, and in Cornwallis Street, Liverpool.

Elizabeth Gilbert, the second daughter of the Principal of Brasenose College, who in 1842 became Bishop of Chichester, was born in 1826, and became blind through scarlet fever at the age of three. She was sensibly educated at home and grew to be a sympathetic, impulsive, unselfish, strong-willed woman. Her delicate frame and poor health contrasted with the vigour and assurance of her spirit. She met difficulties and overcame them with unflagging courage and followed her star with an optimism and devotion which endear her personality to all who care to study, even at this lapse of time, the trials and achievements of her strenuous life.

William Hanks Levy, the faithful partner in her enterprise, was of a different temperament. Blind like her from early years, he had spent many of his days under the irksome restraints of a residential institution. As a pupil at Swiss Cottage he had shown industry and capacity above the ordinary, and had risen to a subordinate position on the staff. His main

duties were the stereotyping of books in Lucas type, but zeal in this occupation did not prevent him from working out in his own mind a reasoned condemnation of the system under which he lived. He was a born partisan and his party was the blind. To him the blind were inevitably in a hostile camp against the seeing, at whose hands they suffered hardship and injustice.

He was ready to work untiringly in the cause of the blind but would brook no interference, would scarcely tolerate advice from the seeing. He accepted Miss Gilbert's leadership loyally and without question, but had she not been blind he would never have become her willing agent.

In 1871 Levy appeared in the rôle of author with his *Blindness and the Blind*. This is a stout volume of over five hundred pages, chaotic in arrangement but encyclopædic in scope. It is a compendium of a lifetime's observation and research, and bears abundant witness to great industry and wide reading. Its contents range from the unpleasant habits of the ancients in regard to the blinding of their prisoners, to the wonders of the newly invented ophthalmoscope. They include a chronological succession of biographies and a survey of the condition of the blind in nearly every country of the globe. It is a pity that this interesting book has never been reprinted as copies are now difficult to obtain.

Collaboration with Miss Gilbert began in 1853 when Levy furnished her with information about the blind of London, and the two pondered long over the

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NEW YORK POINT.

A B C D E F G H I J
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MODIFIED OR AMERICAN BRAILLE.

New York Point and Modified or American Braille.

best means of improving the existing situation. The London schools educated, trained, and then washed their hands of further responsibility. For those who went blind in mature life there was no provision at all. The adult blind, to a deplorable extent, seemed to be either in workhouses or begging on the streets.

The plan evolved would nowadays be called a Home Workers' Scheme. In 1854 a cellar in Holborn was rented as a depot at 1s. 6d. a week. Seven men who worked in their own homes came there for material and returned with their finished products, being paid the full retail price less the cost of the material.

Levy's commencing salary was 2s. 6d. a week, with a commission on sales. These he effected to the trade at wholesale prices. In spite of the moderate dimensions of the manager's salary the deficiency on the first year's working was £144 on a total expenditure of only £231. Nothing daunted, Miss Gilbert pushed on. After six months in the cellar and eight months in a second address the enterprise moved to Euston Road, where a retail shop was opened and accommodation provided for training pupils in additional trades. Appeals were issued to the public for custom and financial support, and the **Association for Promoting the General Welfare of the Blind** was launched on the philanthropic world.

In 1875, 2 men and 1 woman were under training, 26 men and 9 women were employed in the workshops, and 21 men and women received work at

their own homes. The Association moved to Berners Street in 1876 and to its present quarters in Tottenham Court Road in 1893.

In Liverpool similar causes led to similar results. A Home Teaching Society was instituted in that city in May 1857, and its operations disclosed the same needs as those experienced by the blind in London. Miss Wainwright, its secretary, employed a blind man and later a blind woman also to visit the sightless in their own homes. It was found that what was required most of all was employment for those who had been trained at Hardman Street, and both training and employment for those who had gone blind in later life. Temporary premises were acquired in 1861 and twenty of the unemployed were given work. Stock accumulated so rapidly that a retail shop became a necessity, and by means of the relief thus afforded the undertaking was enabled to expand. Miss Wainwright died in 1867, but by this time the society was firmly established and grew uninterruptedly into the present splendid factory in Cornwallis Street, where 175 men and women find an adequate environment for their working days.

Epoch-making enactments do not usually reach the Statute Book without much preliminary advertisement, canvassing and debate, and this was certainly so in regard to the Education Act of 1870. The blind world were fully alive to the implications of the impending legislation and made valiant efforts to secure the inclusion of blind children in the measure that was



Elizabeth Gilbert.

about to be proposed. In this worthy endeavour Miss Gilbert played a leading part, and early in 1869 drafted a memorial for presentation to Mr Gladstone's government. She succeeded in gaining the co-operation of the institutions, a rare feat in those days, and submitted her manifesto in July as the unanimous petition of the blind world. A personal interview with My Lords was sought and granted. An influential deputation waited on Lord de Grey and Mr Forster in February 1870, and pleaded powerfully the cause of the blind child. Twenty-nine institutions were represented, and many well-known Members of Parliament took part. Lord Houghton introduced the visitors, and argued that the blind should have "a fair share of protection and interest in any measure of general education." Lord de Grey replied sympathetically, but excused the Government for not committing themselves, on the well-worn ground that it would be a dangerous precedent to give preferential treatment to any one class of the community.

It is a characteristic touch of those Victorian days that Miss Gilbert, although the author and engineer of the whole enterprise, had to wait with her lady friends, a prey to trepidation and suspense, in the Westminster Palace Hotel, while their lordly males were on the stage at Whitehall.

Mr Forster's Bill became law. The blind were not mentioned, but neither were they excluded, and, as will be seen, the Act of 1870 had its due influence on the education of the blind. From the right to compulsory

schooling the blind were not debarred, and in several centres arrangements were made for their attendance at the newly established schools. The old arguments against segregation, which had helped to entrench Roman type, were brought into play in support of day-school attendance.

“The free intercourse with the seeing gives courage and self-reliance to the blind, and a healthy stimulus which enables them to compete more successfully with the seeing in after-life than those who have been brought up altogether in blind institutions.

“Blind children should be sent as early as possible, at least after seven or eight, to an ordinary sighted school, if not before to an infant school, and kept there at least till ten years of age. Objections may be raised by the teachers of ordinary day schools, to their assuming this additional responsibility, but their objections may be and have been overcome by a number of teachers who have taken the trouble to learn Braille and other types, and so qualify themselves for the work as not to interfere in any way with the performance of their ordinary duties.”

Glasgow was the leader in this movement, and, speaking generally, it had a greater vogue in the north than in the south, where London proved the exception to the rule by adopting the Board School system in a modified form.

The following paragraphs from the *Royal Commission's Report* (1889), although written some years after the establishment of the system, may be

quoted here as giving a concise description of the method :—

“The school boards at Bradford, Cardiff, Sunderland, and Glasgow have undertaken the education of the blind within their districts, and 61 children in all are under instruction in these towns, 28 being educated in different schools in Glasgow alone. In most cases the children follow the ordinary time-table with their seeing companions, and associate with them both in school-time and play-time, Bradford and Sunderland being the only exceptions to this. On the occasion of the visit of the Commissioners to Glasgow, the school board and their teachers expressed themselves as satisfied with the success of the experiment of educating the blind with the seeing in the board schools.

“In London the blind children usually attend the ordinary day schools, and share as far as possible in the instruction there given; but they also, on specified days, receive special instruction at centres, of which there are 18. The attendance of these centres ranges from 3 to 15. The total number under instruction at Lady Day 1888 was 132. The children are examined with the other scholars at the annual Government examinations of the ordinary day schools which they attend. At Lady Day 1888 the staff consisted of a superintendent and five female assistants, all of whom had been trained at the **Royal Normal College.**”

In 1874 the **Charity Organisation Society** appointed a Committee to consider what could be done to improve the condition of the blind, and particularly to inquire

into the steps that were necessary to promote better industrial training and more adequate employment. Representative members were appointed from the ranks of workers among the blind all over the country, and the ground was thoroughly explored. The committee met thirty-nine times, and their recommendations show a clear appreciation of the situation and an energetic desire to remedy the gravest of its shortcomings. They seemed to have felt, however, that their findings would not have sufficient weight to secure the necessary reforms, and pressed for the appointment of a Royal Commission to go still more fully into the question.

The six headings into which they divided their problem were as follows:—

- I. What is being done industrially for the blind, and in what ways—
 - (a) For children.
 - (b) For untrained adults.
 - (c) For trained adults.
- II. What more can be done through existing agencies—
 - (a) By improvements in system of working.
 - (b) By opening up new employments.
 - (c) By co-operation amongst the agencies.
- III. What new agencies, if any, are required?
- IV. To what extent can the blind become self-supporting?

- V. What provision at present exists for the support of the blind not able to maintain themselves by their own industry; and what improvements, if any, are desirable in the system on which funds for this purpose are administered?
- VI. To what extent should the education and training of the blind be provided for from the rates or other public sources?

The Committee put forward proposals which were in part applicable to the whole country, and which in part grappled more particularly with the Metropolitan problem. They found that there were overlapping and lack of co-operation, and suggested a general Council of representative experts. They wanted trading accounts kept properly with no admixture of the charitable element. In the same spirit they contended that goods made by the blind should be sold in the open market at competitive prices, and that the wages paid should correspond with the economic value of the work done. They found, of course, that a great increase was required both in the number of training and of workshop places. The United Kingdom could boast at that time of only 800 workshop employees. The Committee considered that the Guardians of the Poor should be persuaded to make fuller use of their powers in the matter of paying training fees, and that general action in this direction would be accelerated by State inspection of training centres and workshops. The number of blind men

and women employed in the London workshops was only 150, and stress was laid on the need for co-operative buying, a central agency and a depot for samples. The Committee did not confine itself to the industrial problem. It was strongly in favour of blind children being sent to the ordinary Board Schools and recommended that special attention should be given to sensible personal training during the first five years of life.

In some of the recommendations of the C.O.S. Report, it is not difficult to recognise the constructive energy of Dr Armitage, who served on the Committee and who must now have fuller notice.

Thomas Rhodes Armitage is one of the great figures in the education of the blind. By single-minded devotion, by knowledge and sagacity, by incessant missionary effort and by the expenditure of a large fortune, he brought about a new era in blind education and left a deep and lasting imprint on the methods by which that education was carried on.

He was born in 1824 and spent much of his youth in France and Germany. The mastery of French and German thus acquired was of great service to him in later years when he was as much at home on the Conference platform in Dresden, Berlin or Paris, as he was in London or Boston.

He qualified as a doctor of medicine and for some years practised in London. His sight, which had always been weak, however, became worse, and he gave up medicine in 1860 and thenceforward devoted

himself and his inherited wealth to the service of the blind. He reformed the **Indigent Blind Visiting Society** and made it an efficient instrument for the relief of distress among the poor blind of London.

After this introduction to the world of the blind Armitage extended his investigations to cover the whole field. The attempt to secure a solution to two aspects of the problem was to constitute his life-work. The first was the need for better education, and the second the need for more general employment. His labours for education led to the founding in 1868 of the **British and Foreign Blind Association**, now the **National Institute for the Blind**. The purpose of the Association was to be a central authority and clearing-house in all matters, and particularly in matters educational. The selection of Braille as the universal type was its first important piece of work, and soon it settled down to the useful task of the production of books, writing-frames, maps and other educational apparatus.

Armitage soon found that the problems of education and of employment were intimately connected, and the **Normal College** was in a sense his answer to both. He had been struck by the facts that the Paris school was securing successes in the after-careers of its music pupils to the extent of thirty per cent., and that the English schools had totally failed in this respect. He contended that any institution which cared to devote special attention to the physical training of its pupils and to securing the best possible music teaching would

secure results comparable to Paris. As none of the existing schools were willing to act on his advice he took the opportunity of engaging Francis Campbell of Boston to carry out his designs. The experiment completely justified his hopes. Campbell, who lived to become a leading figure among teachers of the blind and who died in 1914 full of years and honours, was undoubtedly the right man for the enterprise. Himself a blind man, he had secured the post of Head of the Music School in the **Perkins' Institution** in 1861, and by energy and hard work had made his department a success. As Dr Howe's time and energies were distributed over many interests besides **Perkins**, he left more and more responsibility to his blind lieutenant, who thus gained valuable training in residential school management. Campbell had come to Europe in 1869 to recruit his health and to pursue his musical studies at Leipsic. On his homeward journey in 1871 he met Armitage, was quickly enthusiastic over his proposals and threw himself with ardour into this pioneer work. £1000 was obtained from Henry Gardner, and with another thousand from Armitage's own purse the College was opened with two pupils, on a corner of its present site. It grew rapidly and its fame spread far and wide. The two factors of sound physical training and of the most distinguished music teaching that could be obtained were always characteristic marks of its curriculum and the high reputation of the College resulted in attracting to itself the best blind talent of the country.

The other side of Armitage's work for the better employment of the blind consisted in a crusade among the institutions to induce them to include after-care among their activities, and to help their pupils to self-support by the adoption of the Saxon System. This system, like Miss Gilbert's early efforts, can best be described as a Home Workers' Scheme. The **Dresden Institution** trained its pupils in basket-, brush- and rope-making and the like, and when the training was over each returned to his native town or village. He was supplied by the institution with an initial equipment and with material at cost price, and was assisted in the sale of his wares. Local markets were encouraged, but when this was impossible the goods were bought in by Dresden. To encourage perseverance a grant of about £5 a year was made to each worker, the amount varying according to his needs. Armitage failed to secure the adoption of the system in this country. He pressed its claims with his usual insistence and pertinacity, but the conservatism of the institutions was too strong for him. It was not until fifty years later, in 1920, under the guidance of the Ministry of Health and with the stimulus of Treasury grants, that the Saxon System took root in Britain.

Armitage's work in connection with the adoption of Braille by the institutions of Britain, Europe and America has already been noted. In 1870 he published the first edition of his book, *The Education and Employment of the Blind*, and in 1886 brought out a second

and enlarged edition. In it can be found a clear picture of his missionary labours and a useful glimpse of the world of the blind as it struck an informed and deeply interested observer. Armitage has a gift for clear exposition, a talent not granted to all who write about the blind, and his volume can still be read with profit and enjoyment. It is accurate in statement and sagacious in counsel. Time, which awards inexorable verdicts, has justified the author in most of his contentions.

The third quarter of the century was, as has been explained, a period of questioning and self-criticism, but this seems to have accelerated rather than retarded progress. The first ten years of the last quarter showed, indeed, a marked advance. For this period there are, fortunately, some interesting statistics in a publication by Mr William Harris of Leicester. In the year 1866 that gentleman, with Mr Mansfield Turner, had brought out for private circulation, *A Guide to Institutions and Charities for the Blind*. This compilation was so acceptable that a public edition was called for in 1870 and a second edition was issued fourteen years later. In the preface to the 1884 edition the editors took the opportunity of making some striking comparisons. In the year 1870 the goods made by the blind realised, in England, the sum of £33,598, and in Scotland £21,930. By 1883 the turnover had risen to £73,865 and £39,564 respectively. In 1870 the income of the institutions and workshops from charitable sources was, in England, £31,273, in

Scotland £7943. By 1883 these figures had grown to £56,448 and £14,021 respectively. It is further stated that in 1883 the number of institution inmates was, in England, 1298, in Scotland, 161; while the number of workshop employees was, in England, 782 and, in Scotland, 330.

CHAPTER VI

STATE AID FOR EDUCATION

IT has been abundantly shown that the British institutions, while each retained characteristic features, bore a strong family resemblance to one another, and that programme and methods were fairly uniform. In spite of this, there was little conscious co-operation, and even in the Continental schools, which about 1850 were probably ahead of those in Britain, there was little feeling of professional solidarity. This, however, grew rapidly in the last quarter of the century, and gave rise to a number of conferences where common problems were frankly discussed and standard doctrines formulated. The first general meeting of this kind was held at Vienna in 1873 and was followed by one at Dresden in 1876, one at Berlin in 1879, one at Frankfort in 1882, one at Amsterdam in 1885, and one at Cologne in 1888.

The consensus of opinion revealed and forwarded by the first four of these conferences was summarised in 1883 by Herr Moldenhawer of Copenhagen as follows :—

“In Germany the congresses have led to the discussion of different questions, and we may say that it has been generally acknowledged that blind men who

can gain their living by work, ought not to be received into asylums or hospitals, but to go out into the world to work and gain their bread; that the education of blind children ought not to commence later than that of seeing children; and that preparatory schools are the best means of taking care of small, blind children, and give the best guarantee for a proper treatment; that it is not right to prefer music to the handicrafts, but that in each case the practical result to be gained for the individual is to be looked upon; that it is a duty to let all qualified blind children learn something useful; and that it is not sufficient to let a certain number be received into blind schools while the rest grow up in ignorance. It has been agreed that a thoroughly good education is even more necessary to the blind than to the seeing, that they may become capable of getting a correct idea of the world, and of living amongst their seeing fellow-creatures; that drilling is of the greatest significance for the development of the blind, not only of their body, but also of their character and will; that a literature for the blind ought to be founded; that a common alphabet ought to be adopted by all blind schools; and that the Braille system is best qualified to be generally used, not only as alphabet, but also for music. It has been acknowledged that blind persons who will try to gain their living by their work ought to be assisted, and that an assistance leading to independence can be given in no better way than by being put in connection with the institutions, where the blind have got their education and are best known; and that the assistance ought always to be given with a practical aim, and with a mutual wish to

gain independence as most honourable to the blind as it is to the seeing.

“With regard to the question of blind children being educated in common schools for the seeing, I think that all agree that it is only a means to be employed *in the absence of something better*, since in ordinary schools so much is wanting of what belongs to the first conditions of a good education of the blind. If, in a large town, where there are many blind children, their reception in a common home is considered undesirable, it is preferable to have a special day school for the blind, like that at Berlin. But for the large number of blind children living in the country and the small towns, it is necessary to have a sufficient number of preparatory schools and institutions, and the necessary means for receiving not only all those who are of the right age for being admitted to an institution, but also those blind children who are *not old enough* to be received there, and who can not be educated at home so carefully as they ought to be. For those, too, who are *too old* to be received into a school, there needs much more doing than hitherto has been attempted.

“It is to be hoped that the Congresses and the general interest in the condition of the blind awakened by them may occasion the erection of primary preparatory schools, and of institutions for the blind, sufficient for giving all qualified blind children a suitable education; so that no blind man, who wishes to work for his bread, shall be incapable of doing it for want of the necessary assistance from his fellow beings, from the community, and from Government.”

The paragraphs above quoted were read at the first British Conference, that held at York, to mark the

jubilee of the school in that city. It lasted from the 16th to the 26th July 1883, and attracted to it most of the leading figures in the blind world of the day—Armitage and Campbell attended from London; Martin and Neil from Edinburgh; Forster and Marston from Worcester; Wood from Sheffield; Brunton and Bryson from Liverpool; M'Cormick and Humphries from Manchester; Harris from Leicester; Macdonald from Dundee, and Miss Mary Hobson from Belfast. York itself was ably represented by Mr Munby who held the post of Hon. Secretary of the Institution till his death in 1914, and Mr Buckle its energetic Principal.

The topics discussed ranged from industrial employment to higher education. They were handled with vigour, and an outspoken divergence of opinion often added piquancy to the discussions. The reforms propounded were far in advance of current practice, and the whole tone of the Conference manifested a keen desire for progress. The same topics have appeared on many programmes since, and are now discussed by men unknown in 1883, but finality is still to seek.

Before the next Conference met the Royal Commission had begun and finished its work, but it may be well to sacrifice chronology to convenience, and give here a list of successive British meetings:—

London (Norwood)	.	.	.	.	1890
Birmingham	.	.	.	.	1894
London (Westminster)	.	.	.	.	1902
Edinburgh	.	.	.	.	1905
Manchester	.	.	.	.	1908
Exeter	.	.	.	.	1911
London (Westminster)	.	.	.	.	1914

Shortly before the York Conference, the blind of England and Wales had a substantial fortune left for their benefit. This came from Mr Henry Gardner, a wealthy citizen of London, whose interest in the blind had been aroused, it is said, by a partial failure of his own sight in advancing years. Gardner died in 1879, and by his will left £10,000 to each of three London institutions, the **School for the Indigent Blind**, at St George's, the **London Society**, at Swiss Cottage, and the **Association for the General Welfare of the Blind**, now at Tottenham Court Road. Generous though these bequests were, they were dwarfed by the testamentary establishment of a special Trust for the blind of England and Wales with a capital of £300,000. A scheme for the administration of the interest on this large sum was drawn up at the instance of the Court of Chancery in 1882. Some modifications were introduced in 1894, and the Trust's income, after the payment of necessary expenses, is now allocated in the following manner:—

1. Two-ninths to instruction in music.
2. Two-ninths to instruction in other professions and in handicrafts.
3. Two-ninths in pensions.
4. Three-ninths left to the discretion of the Committee.

Its first secretary was Henry J. Wilson, who retired in 1920 after nearly forty years' service. Wilson was a man of tact, courtesy and unaffected zeal in the

welfare of the blind. As the years passed, his friendly offices were more and more sought as confidant and chairman. He stood apart from inter-institutional jealousies. Neither he nor the Trust had any axe to grind. His rooms were neutral territory, and they became to an increasing extent the meeting-place of the blind world. Innumerable gatherings were held there, and not a few movements had their inception round his table.

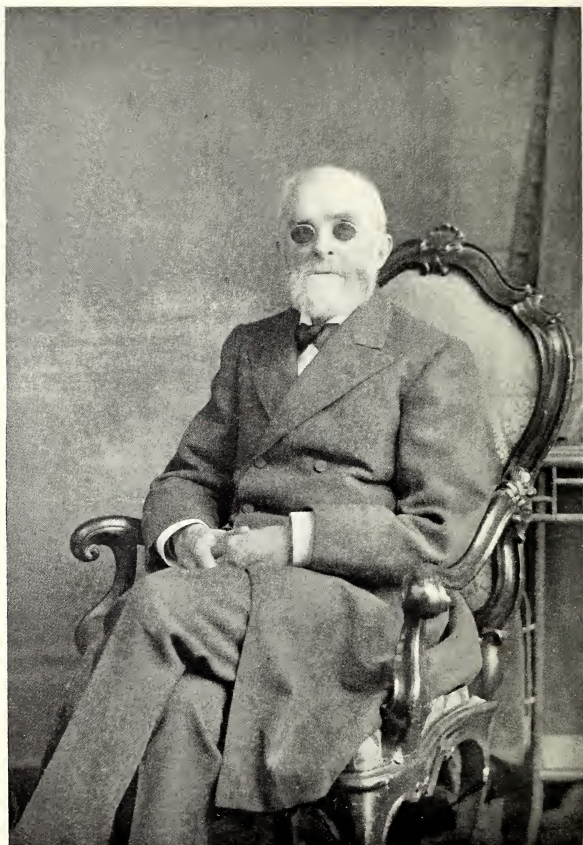
"Some general inquiry into the condition of the blind," to use a phrase from one of John Bright's letters, was beginning to be recognised as necessary, and in July 1884 the final push was given by a conference called at the instance of the Duke of Westminster in Grosvenor House. Exactly a year later a Royal Commission was set up "to investigate and report upon the condition of the blind in the United Kingdom, the various systems of the education of the blind, elementary, technical and professional at home and abroad and the existing Institutions for that purpose, the employments open to and suitable for the blind and the means by which education may be extended so as to increase the number of blind persons qualified for such employments."

The reconstitution of the Commission, with the extension of its reference to the Deaf and Imbeciles in the following year, did not affect its work as far as the blind were concerned, although it was unfortunate in that it gave State recognition to the vicious bracketing of blind with deaf. Its Report was

published in July 1889, and the bulky record of its four years' labours is a document of permanent value. No such comprehensive survey of the world of the blind has been made either before or since, and for the student it will always remain a vast mine of accurate information. Dr Armitage was a member and his hand can be traced in many of its recommendations.

The Report is not in every particular as he would have written it. He himself gloomily calls it "the best compromise possible under the circumstances," but this hardly does justice to his masterful spirit, for the Report is, to a notable extent, the expression of his own convictions and his own policy thought out and expounded in the book previously referred to fifteen years before the Commission began its work.

The condition of things revealed by the investigations of the Commission were disheartening enough. Of six thousand blind individuals then interrogated more than half, although trained in institutions, were contributing nothing towards their livelihood, while of the rest the majority were earning only a few shillings. Of those trained in music and piano-tuning a negligible proportion only were doing anything to maintain themselves. Judged by the industrial success of their pupils the institutions had unmistakably failed. For this there could be no justification. It was not that the institutions were putting before themselves an unworldly aim of education or setting commercial standards at naught. They trained in industrial occupations with the end that the pupils might earn



Sir Francis Campbell.

their living thereby, and so stood condemned on their own showing. It may be that too much time was spent, as Dr Howe had alleged many years earlier, in showy attainments which had little value in education or in money. It certainly was true, as the Commission pointed out, that much could be done to improve the standard and the thoroughness of the training given, but above all the need was for continuing care and specialised supervision during the years after school, a need which is now universally recognised but which in those days, except at Dresden, was not above the horizon.

With such evidence before it the Commission pressed naturally for the improvement of technical training, a great increase in workshop accommodation, and the general adoption of the Saxon System. It wanted to release charitable funds for the assistance of the adult and aged blind, and recommended that responsibility for education and training should be laid upon the State. Compulsory attendance at school should be enforced on blind children from 5 to 16 years. "From 16 to 21 the School Authority should have the power and the duty to assist all necessitous blind persons to maintain themselves while learning a trade. Those who become blind from 21 to 50 should equally receive help from the School Authority." It recommended co-operation among pensions societies. It held that the State should provide liberally for the aged blind and that Boards of Guardians should be generous with out-relief.

The Commission's Report is a historic landmark. It is a monument of the best opinion of the day on all aspects of the blind problem. Much of its advice has been ratified by events, and on the strength of its recommendations the 1890 and 1893 Education Acts were added to the Statute Book. The main direction in which later opinion has departed from the Report is in requiring State assistance for services concerned with the adult blind. The discussion of that subject, however, belongs to the next chapter, and it will be more convenient to attempt here an outline of work among the children till the present day and to trace the action of the State on their behalf.

During the last generation a great step forward has been taken in the physical training of the blind. In the early days of the institutions, nothing had been attempted in this direction. If the scholars were adequately fed, clothed and lodged, it was felt that their physical needs had been met. Dancing was not thought of as a possible relaxation, and even if it had been deemed practicable it would have been ruled out on other grounds. Even after 1870 when the drill sergeant was assuming his sway in the most up-to-date schools for ordinary children and the **Normal College** was showing the way to other schools for the blind, drill and dancing would have been regarded as fads and fancies. Contemporary evidence is the surest test of all such generalisations. The following was written in 1883 about one of the largest and most influential of the institutions of the country: "Nothing has yet

been done for the physical education of the blind children. The girls still continue high and round-shouldered and stooping ; no backs are yet to be seen on the forms on which they sit for hours daily, in stooping positions. As the Committee have means for providing backs to the seats, and for introducing all those means which contribute to the improvement of the physique of the blind, it is a painful duty to be obliged to mention publicly the apparently utter neglect of physical training." The condition of the London Day Centres at the same time was not much better : "The physique of the blind children (in these schools) is utterly neglected ; gymnastic models have been lent to the superintendent of the blind children under the School Board, who is devoted to her work ; but there is not enough space in the little rooms (where usually a few blind children are collected) for them to stretch out their arms while standing. This want of space has been mentioned as a cause why they could not even make an attempt at introducing some elementary exercises."

A companion picture written by another hand in the same year will ring true to readers of a later date. If blind children "are left to their own resources, the normal condition will be to have a blind companion linked on either arm, or more if there is room, and to tramp, tramp, backwards and forwards till the bell rings for school or dinner. During this march the tongues wag furiously, and it is curious to see in what a summary manner

any obstacle is removed which may happen to get in their way."

There was probably a larger gap between the physical training of the Board Schools, poor as it was, and that of the schools for the blind than in any other part of the educational programme. The staffs were still willing to accept the superficial view that blindness must preclude hard or systematic exercise. The normal child derived most of his physical training from the games of the playground, and the massed drill affected him little either for good or ill. It was the playground more than the drill sergeant that the blind child missed. In history and geography his teacher strove to minimise and overcome the obstacles which blindness put in the way of his learning, but on the side of sport and games his teacher acquiesced in the inevitability of inaction.

To all this the physical care of the pupils in a school of to-day presents a notable contrast. The drill is under the care of qualified teachers who have had several years' training in a specialised college. Remedial exercises now form an important feature in the care of blind children. The proportion of entrants to a school who suffer from postural or structural defects is surprisingly high, but to a great extent these can be and are rectified by proper treatment. Dancing is a favourite pastime in every school, and many blind children have extensive repertoires of country, folk, and even sword dances. To these must be added the exhilaration of organised games in the

playground, with country walks and gardening. The hygiene of the pupils is better than it used to be. The dietary table is more carefully constructed and the clothing made more simple and light. The ophthalmic surgeon visits periodically and treatment that might improve the eyesight is at once prescribed. The dentist, too, is a valued member of the staff, and by his preservative treatment secures to the youngsters much health and comfort that, without his care, would be inevitably lost.

The Royal Commission reported, as has been stated, in July 1889, and exactly twelve months later Bills for the education of blind and deaf children in England and in Scotland were introduced into the House of Lords. Lord Cranbrook, who held office in the Conservative administration of Lord Salisbury as Minister for Education (or, as the post was then called, Lord President of the Council on Education), had charge of the Bills, and his chief though friendly and constructive critic was the Earl of Kimberley, the peer who succeeded him as Minister when the Liberals came into office in 1892. The Scottish Bill was read a third time on the 1st August and sent to the Commons, where it finished its uneventful course in the autumn and came into force on 1st January 1891. The English Bill passed its Committee stage in the Lords but never reached its third reading in that Parliament. It was recommitted three years later, and on the 25th July 1893, with Lord Kimberley in charge of its fortunes, it was read a first time. The

debates on the second reading and Committee stages were very similar to those of three years earlier with Lord Sandford in the rôle of chief Opposition critic. This time the Bill had a safe passage through the Commons. It received the Royal Assent on the 12th September and came into force on the 1st January 1894. This Statute, known as the Elementary Education (Blind and Deaf Children) Act, 1893, consists of eighteen sections, and aimed at extending to blind and deaf children the education made generally compulsory by the Act of 1870.

“The efficient elementary instruction which under the Elementary Education Act, 1876, a parent must cause his child to receive, shall, in the case of a blind or deaf child, be construed as including instruction suitable to such a child, and the fact of a child being blind or deaf shall not of itself, except in the case of a deaf child under seven years of age, be a reasonable excuse for not causing the child to attend school, or for neglecting to provide efficient elementary instruction for the child.

“It shall be the duty of every school authority, as defined by this Act, to enable blind and deaf children resident in their district, for whose elementary education efficient and suitable provision is not otherwise made, to obtain such education in some school for the time being certified by the Education Department as suitable for providing such education, and for that purpose either to establish or acquire and to maintain a school so certified, or to contribute, on such terms and to such extent as may be approved by the

Education Department, towards the establishment or enlargement, alteration and maintenance of a school so certified, or towards any of these purposes, and, where necessary or expedient, to make arrangements, subject to regulations of the Education Department, for boarding out any blind or deaf child in a home conveniently near to the certified school where the child is receiving elementary education."

The existing institutions had an immediate accession of junior pupils. For these, fees were paid by the Education Authority that sent them, and in respect of them a grant was paid by the Treasury. Many of the institutions had a system of election to free places by subscribers' votes and this method was only slowly given up. It was not uncommon to find in the same school, free pupils admitted on this basis and pupils for whom fees were paid by a School Board.

Although the School Boards readily accepted their new responsibilities, attendance officers had to be educated up to the idea that blind children should be sent to school even when this meant separation from their parents. The age of five was felt by many institutions and most parents to be too young, and even after the lapse of nearly forty years the average age of admission is much higher than it should be. In this respect districts vary widely. As might be expected, the large towns are ahead of the country areas.

The paying of fees to the existing voluntary schools was the principal way in which the Education

Authorities discharged their obligations under the Act. The schools were certified and inspected by the Board of Education and this led to many improvements in accommodation and equipment as well as in method and level of instruction. In some cases the insistence by the Board on what it considered necessary reforms led to the relinquishment by the institutions of their elementary departments. This was the case in Nottingham, Norwich and Plymouth, though it should be noted that it took eight years or more to bring about this step. In Bolton, Burnley, Cardiff, Leicester, Manchester, Nottingham and Oldham the Education Authority opened day schools for the blind children of these boroughs. Education Authorities combined for the purpose of establishing residential schools in Stoke-on-Trent and Gorleston-on-Sea, but unfortunately these were designed for both deaf and blind. The School Board of Leeds took the same ill-advised step and opened a combined residential school. Blind and Deaf go well together on paper. They are both a special item in the general programme of national or municipal education. It is almost inevitable that they should be thrown together in Schemes and Regulations. From these it is an easy step to meet their needs by housing and schooling them together. In reality there is little in common between the educational problem presented by the blind and that of the deaf. Both have more points in common with the normal child than they have with one another. In practice, too, it is difficult to mete

out equal justice to the two sections. The school is apt to become lop-sided. As the blind are usually in the minority they are in danger of becoming a mere appendage of a school for the deaf. For the same reason the headmaster has for the most part had his training and experience among the deaf so that the blind again find themselves without an equal place in the sun. In many respects, a combination of Education Authorities is an admirable body for the carrying out of the provisions of the Act, and it is to be regretted that no large schools for the blind were thus established and maintained.

In London, the School Board took over in 1902 the elementary department of the **School for the Indigent Blind**. They made use of the building for blind boys from 13 to 16 years of age, and set up a corresponding school for girls in West Norwood. The younger children were taught in day centres which had been opened, as previously explained, several years prior to the passing of the Act.

Before 1894 it had been either a privilege or a private expense to secure elementary education for a blind child. Thus it came about that only those who were considered fit through natural aptitude to profit substantially by the teaching were sent to school. Under the Act, this standard of discrimination was lowered. Any blind child, if above the level of mental deficiency, was admissible. Thus teachers who were at work in the early 'nineties complained that the Act had had a bad effect on the intellectual attainments

of their classes. This, however, was a passing phase of only local interest, while the merits of the Statute were solid and unquestionable. All blind children were to be sent to school with their charges laid to a great extent on public instead of on charitable funds. Existing schools were extended and improved. New schools were opened and the Board of Education used its influence steadily for thirty years in the direction of progress and efficiency.

The pupils over the age of 16 had still to be given free places by the institution, or were paid for privately, or by Boards of Guardians. The number in the last-named category steadily increased as the obligation of the community towards its weaker members became more generally accepted, but at the same time it was widely felt that the Poor Law was not the appropriate authority for such a duty.

In 1902, an Act was passed which made considerable changes in local government as well as in education. The School Boards were swept away and Committees of Local Authorities took their place. Elementary education became the business of fairly small units of Government, but the work of higher education was confined to County Councils and County Borough Councils.

“The Local Education Authority shall consider the educational needs of their area, and take such steps as seem to them desirable, after consultation with the Board of Education, to supply or aid the supply of education other than elementary.”

The phrase "other than elementary" was, after a few years' argument, accepted as covering the technical instruction of blind pupils, and the Board of Education began in 1905 to certify as "Day Technical Classes," those institutions which had training departments.

In 1907, the Medical Branch of the Board of Education came into existence, and a work of fundamental value to the young people of the country was begun. Unfortunately the pernicious desire of the bureaucrat for a tidy paper arrangement again came into play. To the ordinary man, blindness and other disabilities suggest pathology rather than education. Even to the average educationalist occupied with the great problems of how best to train the myriad sturdy youngsters of the nation, Special Schools are an uninteresting side-line with which he does not wish to be concerned. Thus it came about that the Medical Branch whose function was the supervision of the medical inspection and treatment of children, had pushed into its care the inspection of Special Schools. As far as schools for the blind were concerned, this transfer did violence to educational considerations. Such institutions do not require more medical inspection than ordinary schools, while the curriculum and methods of instruction are closely akin. The Staffs are ordinary teachers and their work is entirely pedagogical. To decree that that work shall be inspected by members of another profession is indefensible. It should be noted that the Medical Branch, like the Board itself, is limited to England, and that in

Scotland, Special Schools remain under the general control of the Education Department.

In 1907 and 1912, there were founded two bodies whose common object was the advancement of the education of the blind. These were the **College of Teachers** and the **Association of Teachers of the Blind**. The College has, since 1908, conducted examinations and granted diplomas to teachers in schools for the blind. The securing of this diploma is made a condition of permanent recognition by the Board of Education. Its Regulation is in the following terms: "Teachers may be recognised provisionally as Assistant Teachers in Schools for Blind Children for a period of two years from the date of their appointment, pending their passing an examination approved by the Board in the methods of teaching in Schools for Blind Children."

The Association was started, as has been said, in 1912, and soon became a professional body of considerable strength and influence. It is divided, for convenience of meeting, into three branches and publishes a magazine called *The Teacher of the Blind*. The College and the Association were amalgamated in 1924. During the last twenty years the status and qualifications of the teacher have greatly improved. The proportion of certificated teachers has increased along with knowledge of the special methods applicable to blind children. In 1908 it was found, as a result of the first examination of the College, that not a few teachers had been at work for years without having

taken the trouble to master Braille. This would now be impossible.

From 1902 to 1918 nothing affecting the education of the blind was added to the Statute Book, but in the latter year the great enactment of Mr Fisher put into statutory form many changes that had long been desired by educationalists. One of the guiding principles underlying the Act was that education and training should not be denied to a likely student on account of poverty. It therefore extended the powers of local authorities to give maintenance grants to pupils while in training. This was of great advantage to blind adults who might need a course of instruction in some industrial occupation and who were without means of support. The maximum amount of such grant was 30s. a week.

In 1921 an important piece of legislation was passed which codified all the Education Acts since 1870, repealing eighteen enactments in whole, seven almost in whole and six in part. This now forms the legislative basis of the national system of education in England, and so is to teachers an indispensable book of reference. (The paragraphs which deal with blind children (Sections 61 to 69) will be found in an Appendix.)

It has been said that from 1894 fees were chargeable by institutions against Education Authorities. In addition to these fees, the institutions were paid a Treasury grant in respect of each pupil in regular attendance. These payments were first made in accordance with the Minute of 2nd April 1894. The

terms of the Minute empowered the Board or, as it was then called, the Department to pay at the rate of £3, 3s. a year in respect of each child who "has received with due regularity efficient elementary education," and further at the rate of £2, 2s. a year for each child who "has received satisfactory instruction and made satisfactory progress in some course of manual instruction or industrial training approved by the Department." The ordinary curriculum of a school for blind children providing, as it usually did, both elementary education and manual training enabled most schools to claim from the Department at the rate of £5, 5s. per pupil.

These rates continued in force for twenty years. They were amended by the Minute of 17th July 1914, which provided that the grant payable each year to a certified school for blind children would be at the rate of £7 in respect of each day pupil and at the rate of £13 in respect of each resident pupil.

As from the 1st April 1919, in accordance with the provisions of the 1918 Act (Section 44), and as outlined in the Minute of 15th February 1918, a substantial change was made in the method and amount of Treasury payments. The grant of £13 has been increased to £16, 10s., but is only retained in respect of pupils who are not sent to schools by an Education Authority. In other words, those pupils who are paid for by parents or by such bodies as Boards of Guardians continue to be grant-earning, while those sent by Education Authorities cease to be so. Instead of

payments direct to the institution in respect of these children a payment of half the expenditure that has been incurred is made to the Education Authority by the Board. The school now charges to the Education Authority a fee which may approach but must not equal the actual cost of the maintenance and education of the pupil, while the Education Authority recovers half of this sum from the Board. This method holds good whether the pupil is resident or day, elementary or technical.

In Scotland the method is different and cannot be stated quite so simply. The Department still pays grants to all schools for the blind. "Education Authorities which have schools of their own receive grants as they do for ordinary schools. To schools not under an Education Authority a grant is paid not exceeding the deficit of funds required to meet the approved expenditure of the school in each year as determined by the Department after crediting (*a*) contributions received within that year from Education Authorities for the education or maintenance of individual pupils; (*b*) fees, or contributions in relief of fees; and (*c*) revenue from endowments or other local sources, including any contributions from an Education Authority to the school in terms of Section 9 (1) of the Education (Scotland) Act, 1918. This grant shall not, save in exceptional circumstances, exceed in amount the revenue under (*c*)." Under Section 9 above referred to, "Education Authorities may make a payment towards the maintenance of any

school within its area on condition (1) that the teachers are remunerated at a rate not lower than the rate for teachers of similar qualifications employed by the Authority, and (2) that there is a reasonable representation of the Authority on the governing body."

From the time when the Board of Education assumed jurisdiction over schools for the blind in 1894, it strove consistently and with success for their improvement and advance. By the funds at its disposal it had consolidated the position of the voluntary schools and secured as the reward of that assistance a standard of teaching and equipment which put these schools on a level with the general educational service of the country. In 1921, however, the panic "economies" of the Geddes Committee put a sudden brake on progress, and indeed brought about actual retrogression in some directions. In that year the Treasury threatened a curtailment of financial support. In January 1922 the Board passed on the threat. It told Local Authorities (Circular 1246) that it "must restrict its expenditure in making provision for the blind during the year 1922-23 to the figures incurred in 1921-22." As the education and, more particularly, the industrial training of the blind were at this time rapidly-growing services, the policy outlined led to vigorous protests and was eventually abandoned though in a grudging and half-hearted fashion. A year later Circular 1297 saw the light. This unfortunate document called forth energetic remonstrances from the **College** and the **Association**, but this time without



Ethel Winifred Austen.

avail. The Circular foreshadowed new regulations for Special Schools which would have the effect of increasing the size of classes and of lowering the standard of qualifications in the teaching staffs. Before the Regulations were issued in 1925, action had been taken on the strength of the Circular alone and the staffs of several schools had been reduced. Happily, by the close of 1926 better days were already in sight, and the Board has again assumed its rôle of encouragement and stimulation.

CHAPTER VII

LATER BRAILLE AND BRAILLE BOOKS

IN contrast to the tranquillity reached in Britain with the acceptance of a revised Braille code in 1905, the position in America has been one of continuous and strenuous activity. In 1900 the **Missouri School**, which had been the rallying-point of British Braille, threw in its lot with "modified" or, as it was then renamed, "American" Braille. Shortly before this a committee of three had been appointed to study the type problem in the interests of uniformity. This was the forerunner of the Uniform Type Committee of the **American Association of Workers for the Blind**, which began its labours in 1905 and broke all records in type investigation before it was dissolved ten years later.

In 1911 it decided that its researches must include the results of practical tests in the various systems, and Miss Howard, with the assistance of Mrs Fowler, was appointed to carry out the work. The tests themselves were cleverly arranged so that the results from any one set gave a clear indication of the answer to this or that crucial question. "Are characters of few dots easier to read than characters of many?" "What size of dot is the most legible?" These are two out of the many questions which the readers of America

and Britain had to answer, not by their preconceived ideas but by actual reading of specially prepared sheets. The ladies travelled 15,000 miles in the States, Canada and Britain and gathered statistics from 12,000 readers. New York Point, American Braille and Revised Braille were all subjected to this great inquisition. The various tests had been devised with the greatest care and ingenuity. The inquiry was above suspicion of favouring any one system. The Report which embodied the final result was presented to the **Association of Workers of the Blind** at its Conference in June 1913 and aroused the greatest interest. To the surprise of many Revised Braille came out the best. The Committee therefore pleaded for the adoption of the original Braille alphabet as a universal medium, while pointing out the desirability of securing modifications in its contractions.

The supporters of original Braille were the smallest of the three contending sections in America, and it was inevitable that the suggestion to scrap New York Point and American Braille in its favour should meet with a lukewarm reception. If scrapping had to be done let it be in favour of a system which would be better than anything yet formulated. The ideal system might have the old Braille alphabet, but "frequency," the characteristic of both American Braille and New York Point, and the variable base, the proud distinction of New York Point, must be essential factors in the system. The Americans felt that it would be well to enlist the sympathetic interest of the home country in their

enterprise, and dispatched Mr H. Randolph Latimer to pave the way for the universal adoption of an ideally perfect system. Much friendly conference took place in 1914, but Britain had still refused to commit herself when in the summer of 1915 the new system under the name of Standard Dot was expounded to a great Conference on the Pacific Coast. The War had prevented a deputation of British experts from attending and had drawn attention from embossed literature to matters of more vital moment, but even had there been no war it is unlikely that the merits of Standard Dot would have led to the abandonment by Great Britain of Revised Braille. The difficulties in the way of acceptance were outlined by Mr W. M. Stone of Edinburgh in an article contributed to *The Teacher of the Blind* in September 1915. There had been no time to judge Standard Dot on its merits, and Mr Stone contented himself with pointing out that if it were adopted in Great Britain, certain consequences would follow and should be frankly faced. All users of Braille, not only the blind but voluntary writers as well, would have to learn an entirely new system. Existing stocks of books, and these were considerable, would have to be scrapped. Expense would be involved in altering stereotyping machines which were not, in their present form, capable of printing Standard Dot; and lastly, Great Britain would be isolated from the rest of Europe. Mr Latimer replied to this article in the following month from Baltimore, and wisely concentrated on one testing question: "Given that the

Standard Dot system is all its promoters claim for it," he wrote, "are the advocates of the existing system justified in adopting it as the uniform type for the blind of the English-speaking world?"

Mr Stone made his rejoinder in December, and while maintaining the friendly and even cordial tone of the correspondence, he summed up so authoritatively against the adoption of the American theoretically perfect system that no further defence was attempted. Is the gain commensurate with the sacrifice that would be demanded? "What is it that you claim for Standard Dot?" he asked in a telling passage. "I know what you will reply: Uniformity, increase of accuracy, increase of speed. Well, we want uniformity, we want it badly; but we think there are other ways of reaching it. There would be uniformity if you adopted British Braille. There are more readers of British Braille than of any other system of punctography. People frequently talk as if British Braille was the concern only of those living in the British Isles. It is the system of the blind of Australia, New Zealand, South Africa, Canada and India. It is as nearly identical with the Braille of European countries as differences of language make possible, and it is actually read by great numbers in every European country. Therefore, if uniformity is to be the great gain, it is only reasonable to ask you to conform to our system. With regard to increase of accuracy, I must candidly say I think that accuracy, after reaching a certain point, is of little importance.

I find that blind people, children or adults, read quite as accurately as seeing people. And the gain you show in accuracy is so very small—only 2 per cent. You see I am accepting your figures; but it must be remembered they are only theoretically obtained; no actual tests between the two systems have been taken. There remains speed, which is equivalent to fluency. I think this is much more important than accuracy, for without ease there is no pleasure, and without pleasure there is little real reading. Well, what is your claim for this point? Only a gain of 6 per cent. It comes to this, then, as far as I have been able to work it out, that the sacrifices are what I have stated, and the gain is a problematic increase of speed.”

On the 30th of the same month Mr Latimer and his colleagues met in New York and virtually threw over Standard Dot. It was a prompt and dramatic bow to the inevitable. Their decision was now to concentrate on securing improvements in the contractions of British Braille with a view to adopting that system as the universal type. No words could be too warm in praise of the conduct and temper of the American workers. They had laboured indefatigably in their experiments and researches, had produced a system which they knew by reference to statistical tables of results to be better than any existing one. They were foiled by what they must have regarded as British conservatism and yet they never hesitated. Their aim was the establishment of a universal type for the English-speaking world,

and that objective had to be attained in spite of all disappointments and delays. They resolutely turned their backs on their own cherished bantling and asked for the co-operation of the Old Country in improving British Braille. It was a step of heroic self-denial and real statesmanship. Some difficulty was experienced on this side in setting up an authoritative committee to carry on negotiations. **The British and Foreign Blind Association**, already known as the **National Institute for the Blind**, again sought to assume an exclusive attitude, but this was set aside and a genuinely representative committee at last elected under the name of the **National Uniform Type Committee**. It met for the first time in July 1916 and appointed a sub-committee of experts which, under Mr Stone's Chairmanship, considered a list of fifteen changes suggested by the American Committee. The findings of the sub-committee were reported to the full body in November, and in March of the following year they were dispatched to America. The trans-Atlantic post in 1917 was precarious, and the packet never reached its destination. The Report was first read by Mr Latimer and his friends in the May issue of *The Teacher of the Blind*. It was an uncompromising document. "We deeply regret," it stated, "that after long and most careful consideration we have been forced to the conclusion that the proposed changes would not be acceptable to users of British Braille and would tend rather to weaken the system than to strengthen it. . . . [They are] of sufficient importance to derange existing

knowledge of Braille but are not of real value in securing its perfection." Again the Americans bowed to the inevitable. British Braille was not to be tampered with. Could it be adopted whole and unaltered? The general opinion in America was that there were too many contractions in Grade II for the average reader and in all probability it would have been unwise to recommend immediate adoption of the system as it stood. What was done was to draft an intermediate grade, to give it the expressive if inartistic title of Grade $II\frac{1}{2}$ and to secure its adoption as the future type of the Continent. Thus uniformity, if not identity, was at last secured. There is now no obstacle to the use of American books by British readers and very little difficulty to American readers in Grade II Braille. It is a great achievement, and in the record of its consummation the names of Randolph Latimer and W. M. Stone will always find an honoured place.

It has been noted that one characteristic and outstanding feature of the Braille system was the ease with which it could be written. This gave rise at an early date to the custom of transcribing by hand books for school and private use. Painstaking voluntary helpers all over the country took up this excellent form of social service, and libraries were established in most of the large institutions. In 1882 Miss Arnold, a blind lady of Hampstead, started the project of a lending library for adult readers, and, with a friend called Miss Howden (afterwards Mrs Dow), began a collection of books for this purpose. Their first headquarters were in

Fairfax Road, not far from the school at Swiss Cottage. The venture proved a success and two other addresses in Hampstead were occupied before the Library moved in 1904 to Queen's Road, Bayswater. Two years later this small organisation had the good fortune to secure as its Librarian a woman of exceptional gifts and of magnetic personality. This was Miss Ethel Winifred Austin, who in the short space of a dozen years transformed the enterprise into a national institution with an indispensable niche in the economy of the blind. Under Miss Austin's management the Library grew rapidly. It was soon too big for its premises at Queen's Road, and the committee were fortunate in securing admirable buildings in the old headquarters of the Architectural Association in Tufton Street, Westminster. This was in 1916, and the move was rendered practical by a substantial gift of £12,000 from the Carnegie United Kingdom Trust. In the same year Miss Austin attained one of her greatest ambitions in being able to declare the Library free to all blind readers. As it gradually assumed national proportions smaller collections of books were handed over to its keeping by their owners or custodians in order to prevent overlapping and to secure the greatest amount of usefulness from the material available. In 1917 the **Catholic Truth Society** transferred its 700 volumes, and in the same year there came the notable accession of 10,000 volumes from the **London Home Teaching Society**. In the following year the books of the S.P.G. Library were also housed in Tufton

Street. In that same year (1918) a Northern Branch was opened in Manchester. The tide of the Library was strongly at the flood when on the 17th May, at the height of her powers and her influence, Miss Austin died. In the development of programmes and of institutions it is extremely difficult to say how much is due to the work of any one individual. The weakest has his influence and the strongest is not indispensable. At the same time it is safe to say that the **National Lending Library** of to-day is Miss Austin's creation. A growth so phenomenal is readily accepted when seen in retrospect, but it must not be forgotten that a few sentences of statistics cover crowded years of brilliant effort. The conservatism of individuals and institutions, so inveterate in its obstinacy, had to be overcome by a pertinacity greater than its own. Many difficult corners had to be negotiated and many reverses and delays now forgotten had to be endured. On the whole, however, Miss Austin's brief twelve years of work for the blind summed up a gay career. She herself was intensely alive, and her buoyant personality surmounted difficulties with a smile. She fought her fights with a good-humoured chuckle and her victories left behind a feeling of admiration but no sting. She made no enemies. On the other hand, her friends were legion, for she had the happy gift of winning staunch adherents and of enlisting enthusiastic advocates for her cause. Her sudden death was a calamity not only to the Library but to the blind world as a whole.

The **Library** was mainly built up of hand-written

books, and a small army of voluntary writers in addition to paid blind copyists was employed in filling its shelves and in replacing worn-out volumes. In the early years of its existence there were few printed books to be had and it was only slowly that the stereotyping houses of London and Edinburgh met the need. In 1909, after allowing its fortunes to sink to a low ebb, the B. and F. B. A. began a vigorous attempt at increased output. In 1913 it called to its aid Mr (afterwards Sir) Arthur Pearson, who had recently become blind. The new recruit brought with him abounding energy, great advertising knowledge, an effective influence with the newspaper world, and the personal appeal of his own loss. He embarked on a widespread appeal to the public for the cheapening of Braille books, and in that enterprise brought into play, with undiminished verve, the driving force which had made him a captain in Fleet Street. He was soon able to show to an astonished and rather slow-going blind world what could be accomplished by hustle, flair, daring and a wide acquaintance with advertising media. He changed the name of the **Association to the National Institute for the Blind**, rebuilt its headquarters in Great Portland Street in a palatial style, and stocked the new premises with an elaborate and up-to-date equipment for the printing of Braille. The output, assisted still further by a substantial grant from the Carnegie Trust, was greatly increased but, to the surprise of many, the price per volume was also enhanced.

Although the **National Library** was deprived of Miss Austin's inspiration and guidance in 1918 its progress continued unchecked, and another great extension of its premises has recently been carried out. During the year which ended in March 1929, the number of volumes circulated reached the huge total of 231,000. As the present Librarian says, "This is the best and surest guarantee that the Library is filling a very real need in the lives of the blind."

The books read by the blind have not only grown in number, they have changed in character. Frequent reference has been made to the religious nature of the early teaching of the blind. The Bible was the first book to be embossed in any new system, and the majority of the other works had a pronounced pietistic flavour. James Gall's publications were all of this kind. Here is a page from one picked at random from a pile of his volumes: "You have a body and a soul. Your body will soon die and be laid in the dust. Your soul will live for ever. It will live for ever with God or with Satan. It will live for ever in Heaven or it will live for ever in Hell. It will live for ever in peace and joy and love or it will live for ever in fire and pain and woe." This bears the date 1839, and it was many years before the horizon widened. The change is one of mental attitude as well as one of type. The blind were in the position of wards who should only be allowed what was good for them. Now each is recognised as having the rights of a full-

grown citizen with as much claim to choose his own reading as his own bus route or his own boots. It is the ancient love of censorship which dies hard in well-meaning and masterful minds. The blind have been emancipated from this control, and the **National Library** is now a varied collection showing not only wise discrimination but a wide catholicity of choice. The amount of tactual reading has increased because of the growth of the **Library**, but the **Library** itself has in turn been stimulated to its expansion by the rapid increase in the numbers of its potential readers. The capacity to read has been partly the result of the schools but also it is to a large extent the result of the patient labours of the home teacher.

Another point deserves attention. It is now plain, although in the past controversy has been waged on the subject, that both hand-written and stereotyped books have their place in blind economy. Printing cannot be undertaken without the expense of metal plates, and, unless there is a reasonably large demand for copies of the work, the cost of printing is unjustified. Books which are not likely to be required for general use are therefore most suitably provided by hand-written copies. Schoolbooks and standard works which many institutions as well as individuals will wish to possess should be printed, but students' books and other works of limited appeal may well continue to be written. In this connection some figures may be of interest. During the year which ended in March 1929 there were added to the **National Library's** stock

of Braille books, 3517 manuscript Braille and 5524 stereotyped volumes.

The great amount of literature which is now in Braille makes it unlikely that the question of further revision will be kindly received when next it is raised. The American workers have shown that, with all the advantages of experience, scientific method and endless patience, the most carefully constructed system is little better than Grade II Braille in any of its essential qualities, and this fact is, in itself, likely to warn off succeeding reformers. If a new system ever takes first place with the blind, it will not be a modification of Braille but the fruit of some entirely new idea.

A word may here be added with regard to music notation. Appreciating the great value of a system whereby music could be read by the fingers, the inventors of most of the early types worked out adaptations of their letters to music. These elaborations, however, are of only antiquarian interest, as Braille has reached the proud position of being the one and only system now in use.

It will be remembered that Louis Braille was himself a musician, and so it is not surprising that his alphabet was no sooner invented than it was made to serve the purposes of his art. The letters D to J in the first line stand for the notes C to B in quavers; the letters of the second line stand for the same notes in minims; those of the third line in crotchets and the fourth line in semi-breves or semi-quavers. The

remaining signs are utilised for the other necessary musical symbols.

The system thus worked out was adopted officially by the Paris Institution in 1852 and was adopted by Dr Armitage as the one which should be popularised in Britain. In 1871 the **British and Foreign Blind Association** published a booklet explaining the notation, and it is interesting to note that this is the first *Key to Braille Music* in any language. The Cologne Conference of 1888 dealt fully with the subject and an attempt was made to secure uniformity of method in the leading European countries. This led to a new edition of the *Key* which incorporated the agreed changes and additions. A third edition of this little volume was brought out in 1896 and a fourth in 1900. It was felt by many that the *Key* was itself in need of simplification and expansion, and so in 1901 Mr Edward Watson, an indefatigable worker in this field, brought out a *Tutor*, or manual of carefully graded lessons. An ink-print copy was published by Messrs Novello & Co., in the following year. This, to use Mr Watson's own words, "was more particularly intended for the use of seeing teachers of blind music students or for those who might wish to assist in the musical education of the blind in any way."

Valuable papers on the education and employment of the blind in music were read at the Manchester and the Exeter Conferences, both of them followed by useful discussions. It was generally felt that there was a dearth of music in Braille, and the attention

of the printing-houses and of the **National Library** was forcibly called to this defect. It was also agreed that improvements in the system itself should be undertaken. A Notation Committee was established (1911) and set itself the task of revising the system. Mr H. C. Warrilow acted as its chairman, and with tact, knowledge and patience he guided his Committee through the ten long years of its labours. The results saw the light in the *Key* published by the **National Institute** in 1922 in Braille and in an ink-print edition brought out by Messrs Novello in 1925. The foundations of the system were left undisturbed. It was a revision, not a revolution, and yet by one change alone the Committee made an enormous advance in the ease and accuracy with which piano or organ music could be learned by a blind student. This was the introduction of what is commonly called the "bar by bar" method. Formerly eight bars or more of the treble clef were written and then an equal number of the bass. In the case of organ music this was followed by the pedal. To a seeing musician who grasps the full score at a glance, the formidable difficulty of combining the three component sections from different parts of the page is obvious. The new method is explained by its name. It enables the student to get each complete bar under his fingers with a minimum of trouble. The Committee also strove successfully to make the notation capable of representing every symbol used in printed music. Like Grade II Braille, the music notation of 1922

/ has reached finality. / To a greater extent than in the case of Grade II it can safely claim to have gone as far as is humanly possible in the ingenious adaptation of means to ends.

The prayer of the musicians in 1908 and 1911 for more music has also been largely answered. The printing houses have increased their output enormously and the **National Library** has built up a great store for the use of all blind music lovers.

CHAPTER VIII

STATE AID FOR THE ADULT

ABOUT the year 1893 an association of blind workers, mainly London workshop employees, was formed under the name of the **National League of the Blind**. This proved a vigorous and militant body and soon made its voice heard in a campaign for State aid. Its propaganda was bound up with much hostile criticism of the institutions. The money which had been given and bequeathed by the charitable public for the benefit of the blind was, it contended, being spent to an undue extent on seeing officials and management expenses. Its official organ was a monthly sheet called *The Blind Advocate* which began life in Manchester in 1898. The files of this rather dull publication have not improved with keeping although one can admire the unflagging energy with which it hurled its adverse criticisms at the institutions and reiterated its demand that the blind should have direct assistance from the State. It contended, and little could be urged against its contention, that the problem should be scientifically handled as a whole and not left to the piecemeal action and insufficient resources of the voluntary agencies. In spite of a proneness to the *argumentum ad verecundiam*, and in spite of a partisan lack of

proportion, the **League** was working in the right direction, and the 1920 Act put upon the Statute Book the principle of its main contention.

The destructive part of the **League's** programme naturally antagonised the institutions and made them ignore the value of its constructive proposals. Although they developed some power of co-operation later they had, for many years, little faculty for collective action. Completely inarticulate, they endured the verbal brickbats of the **League** as best they could and stubbornly set their faces against the notion of any assistance from the State in respect of the adult blind. As had been the case fifty years earlier the problem of the better and more general employment of the blind was forced on the attention of the institutions from without as well as from within. The pace of progress was quickened and the development of the institutions themselves furthered by men who would have preferred to see the voluntary system completely swept away.

In 1905 a conference of workers for the blind was held in Edinburgh, and as the problem of more work and better wages was by that time in everyone's mind a whole day was allocated to its discussion. As might have been expected divergent views were expressed, and in the end a Committee was appointed to work out a solution. Its first plan was to secure Government contracts, and orders for baskets and brushes were given to several of the larger workshops by the Post Office and the War Office. Unfortunately the work could not be executed except at a loss, so that the

institutions were no better off than before. Because of the failure of this line of approach and in self-defence against the confiscatory measures which were being canvassed by the **League** in the form of a Parliamentary Bill, the Committee swung round completely in favour of State assistance. At last the situation was frankly faced. The number of blind men and women employed in workshops was only 2300. About 200 young persons were completing their technical training annually, and for these practically no provision was being made. At the same time the wages paid were inadequate, and owing to lack of funds in most of the institutions very little could be added by way of augmentation to the sums actually earned. As far back as the days of the 1885 Commission the blind workers had stood united in favour of a State subsidy of wages in one form or another, but their petitions had gone unheeded. Now the **League's** Bill had brought the matter again to the front, and along with the demand for municipal workshops it stipulated for an adequate wage. The Committee were thus driven to produce a measure of their own.

As the Labour Party were backing the **League's** Bill the Committee met the Parliamentary Committee of the Trades Union Congress in December 1910, and argued that in any proposed legislation the institutions should not be completely ignored. The two competing Bills were compared and shortly afterwards the **League's** Bill was amended by the inclusion of two clauses from that drafted by the Committee.

The Bill thus altered was laid before a meeting of

representatives of the institutions in March 1911, but did not find favour in their eyes. Resolutions were passed calling for the provision of technical training to be made compulsory on Education Authorities, and approving the principle of subventions to workshops both from rates and taxes. An influential National Committee was appointed which, with the help of a Parliamentary draftsman, prepared a new Bill embodying these principles. This draft was accepted by a second meeting of institution representatives, and was actually read a first time in Parliament in October 1912. Further negotiations then took place with the **National League** who, after securing the addition of one or two clauses dealing with grants to individual blind persons, dropped their own Bill and enlisted the support of the Labour Party for the institutions' measure. This, usually referred to as the No. 2 Bill, thus went forward with the unanimous support of the blind world. A first reading was secured in the month of May 1914. The forward step, however, did not come by means of any of the proposed enactments. Although agreement had been reached, the **League** kept the matter alive by questions from the Labour benches in the House of Commons. In February of the same year Mr Philip Snowden asked the Prime Minister if, in view of the number of the blind who were in workhouses or were begging on the streets, he did not think there should be an authoritative inquiry. Mr Asquith replied that he would consider the question. This was non-committal but it was apparent

that some movement was going on behind the scenes and that the Government were contemplating action.

Three weeks later, on the 11th March 1914, Mr G. J. Wardle, the member for Stockport, was given an unexpected opportunity to bring forward private business in the House, and initiated a most useful debate on the condition of the blind. Mr Wardle proposed a motion in the following terms: "That, in the opinion of this House, the present system of voluntary effort in aid of the blind people of this country does not adequately meet their necessities, and that the State should make provision whereby capable blind people might be made industrially self-supporting, and the incapable and infirm maintained in a proper and humane manner." Sir Herbert Lewis, Parliamentary Secretary to the Local Government Board, in a sympathetic reply said that the Government would raise no objection to the motion being adopted by the House, but pointed out that more precise information was necessary and intimated that an Inter-Departmental Committee would shortly be set up for that purpose.

This was done on the 7th May with the following reference: "to consider the present condition of the blind in the United Kingdom and the means available for (a) their industrial or professional training, and (b) their assistance, and to make recommendations."

For nearly two years the Committee examined witnesses, putting to them close on 13,000 questions and carefully recording their replies. These with supplementary notes and memoranda and with the

Committee's Report and Recommendations were published in August 1917, and created the greatest interest in the world of the blind.

Men's minds had been so full of the comparative merits of competing Bills, and so united in agreement on the principles elaborated in their latest effort, that some surprise was occasioned by the omission from the Report of any suggestion of an immediate recourse to Parliament. Its most important recommendation was in fact a step which could be taken by administrative action. The Committee had been impressed with the need for the more active intervention of the State to secure a measure of central control of the existing agencies, and therefore suggested that a special department or Central Authority should be set up in the Ministry of Health, whenever such a Ministry should be created, and in the meantime in the Local Government Board, for the general care and supervision of the blind. This Central Authority was to have at its disposal funds provided by the Exchequer. It was to be responsible to Parliament for its actions and to be guided as to policy by an Advisory Committee. The Central Authority was set up in 1918, and quickly got to grips with its problem.

A principal clerk was put in charge of the department, and it must be gratefully acknowledged that it was a stroke of good fortune to the blind world that Mr E. D. Macgregor was selected for this work. In the developments that followed the inception of central control Mr Macgregor for nine years played a part

of primary importance. He quickly grasped the intricacies of the problems with which the Ministry had for the first time to deal, and by his wise and statesmanlike recommendations he helped to bring about a veritable transformation. Impartial in his views, shrewd and fearless in his opinions, he rendered invaluable service to the blind men and women of the nation.

On the 7th August 1919, a circular was issued, over the signature of Sir Robert Morant, the first Secretary of the Ministry of Health, conveying the welcome news that as from the 1st July, certain services for the benefit of the blind would for the first time be eligible for grants from the Exchequer. Regulations governing the distribution of the grant were attached to this circular, and formed the basis of the Ministry's payments.

Grants are payable to approved agencies in respect of the following services and at the following rates:—

- | | |
|-------------------------------------|---|
| 1. Workshops | . £20 per worker. |
| 2. Home workers' schemes | . £20 " " |
| 3. Homes and hostels | . £13 and £5 respectively
per inmate. |
| 4. Home teaching | . £78 per teacher. |
| 5. Book production | . 2s. 6d. per volume and
smaller amounts for
music and magazines. |
| 6. Counties' Associations | . £20 per 100 registered. |
| 7. Miscellaneous. | |

In connection with home workers the grant of £20 is only paid when the worker, if a man, is earning 16s. or more a week, and if a woman, 8s. or more. If less than these figures, the grant is proportionately reduced. The Ministry are also prepared to contribute

towards the provision of a home worker's initial equipment to the extent of 50 per cent.

As showing the manner in which the central control of the Ministry has increased the volume of work done, it is interesting to compare the figures of the second completed year after the inception of the Scheme with those for last year:—

Services.	1921-22.	1928-29.
Counties' Associations	£6,844	£9,356
Workshops	31,476	46,800
Home workers	6,117	22,737
Homes	6,673	8,495
Hostels	739	1,074
Home teaching	12,978	26,599
Tools and equipment	147	623
Book production	4,912	8,486
Capital expenditure	...	1,834
Miscellaneous	...	25
Total	£69,886	£126,029

In Scotland the corresponding figures are as follows:—

Services.	1921-22.	1928-29.
Workshops	£7,938	£11,423
Home Workers	11	1,316
Equipment	13	15
Homes	569	703
Hostels	196	174
Home Teachers	1,816	3,014
Book Production	323	417
Outdoor Societies	681	1,342
Capital Expenditure	...	1,066
Miscellaneous	181	207
Total	£11,728	£19,677

From the earliest times there had been a danger of general attention being focussed on institutional work for the blind. The controversy about State aid centred round the workshops, and in many addresses and articles increased workshop accommodation was spoken of as if it contained a complete solution of all the problems of the blind. A due sense of proportion was being lost, and the Central Authority during the first years of its rule did much to create a more balanced estimate of the situation. More than half the blind of the country are, and are likely to remain, unemployable. A large proportion of these are persons of advanced years. Now unemployables do not require workshops but they do, for the most part, need visitation and assistance, and it was held that the appropriate bodies to render this aid were the County Associations in England and the Outdoor Missions in Scotland. The origin of these agencies calls for more detailed notice. The Scottish Missions to the Outdoor Blind had a beginning in Edinburgh in 1857, and extended until the whole country was covered by ten societies, since reduced to nine, and the individual blind visited by a staff of twenty-four home teachers. Their work was looked upon as missionary effort, and the religious instruction and consolation of their charges were their first cares. Next came the teaching of an embossed system of reading that the blind might decipher the Scriptures for themselves. Temporal care was not overlooked and a large number of capable blind men were set up as small traders. In 1905 it was reported that 313

were thus employed. Machinery to cope with the larger problem of the English outdoor blind was later in being effectively organised, although the pioneer of outdoor societies was the **Indigent Blind Visiting Society** of London, which had been founded as far back as 1832. Like the Scottish societies its work was largely missionary effort coupled with the relief of distress and the teaching of embossed reading. In 1852 Miss Graham founded the **London Home Teaching Society**. This gradually widened its area of operations till it covered the home counties. Dr Moon, as has already been seen, was also instrumental in starting similar societies in different parts of the country. In 1906, the first Association of Agencies for the Blind was formed to cover the six Northern Counties. This was an association of all the bodies working for the blind in the area. It was followed in succeeding years by six other Associations, viz., those for

The Metropolitan and Adjacent Counties (now known as The South-Eastern and Counties).

The Midland Counties.

The North-Western Counties.

The Counties of South Wales and Monmouth.

The Western Counties.

The Eastern Counties.

The co-operative action thus outlined was carried one stage further by the formation of a national federation called the **Union of Associations**. This consists of representatives from the seven Associations,

and is a useful instrument for the furtherance of unity of action, and provides a common ground for the discussion of difficulties. In the opposite direction devolution took place to assist the development and control of local affairs, and **County Associations** were formed.

The main duties which each of the seven Counties' Associations places before itself are : first, to compile and maintain a register of its own blind ; second, to promote such co-operation among existing agencies as may lead to an extension of work on behalf of the blind ; third, to form societies in districts where none exist ; and, fourth, to visit the blind in their own homes. On the formation of the Central Department, the Ministry itself undertook the compilation of a register of blind persons, and a great deal of valuable spade work was done. In 1921, however, it was decided to entrust this task to the County Associations grouped as indicated on p. 139. The provision of home teaching also became part of the work of the Associations through the influence of the Ministry. It believed in the intimate co-ordination between registration case work and welfare visiting, and also in the local control of all this section of the work. It therefore influenced the break-up of the unwieldy **London Home Teaching Society**, and the acceptance of its work by the new agencies in the Metropolitan area. The growth of the Home Teaching Service under the guidance of the Central Department was rapid. The one hundred teachers of 1919 had by the 31st March 1929 increased to 406 in England alone, while the qualifications and standard of

efficiency had also improved. In 1923 the Ministry asked the **College of Teachers of the Blind** to institute a 'Home Teachers' Examination, and issued a circular to the effect that all persons appointed to such posts after the 1st April 1924 would be required to obtain the certificate of the College within two years of their engagement. The service has not only expanded, it has changed in character. The chief functions of the old-time home teacher were, as has already been noted, the giving of religious consolation and the teaching of Moon. His successor of to-day is more the social worker than the missionary, more the welfare visitor than the teacher. This change is fundamental, but it is sometimes forgotten or ignored by those who maintain that blindness is no bar to the efficient carrying out of such work.

Another direction in which the Ministry assisted the scattered blind was by the encouragement of Home Workers' Schemes. It was seen in an earlier chapter that Dr Armitage tried hard to induce the British institutions to adopt a system of after-care whereby former pupils might continue to have the benefit of specialised supervision when at work in their own homes. He failed in his endeavour, and long after his day opinion hardened still more against the establishment of home industries. Orthodox opinion claimed that the workshop was the one and only solution of the employment problem. The Ministry pointed out that while workshops might in theory be the most efficient method of dealing with

the industrially trained blind, in practice the existing shops were inadequate to the situation. Further, it was safe to premise that there would always remain a number of blind men and women for whom workshop employment was not practicable, and that for such a scheme of assistance in their own homes was therefore indispensable. The promise of Treasury grants was a powerful aid to the Ministry's pleading, and some of the larger institutions, such as those in Birmingham, London, and Nottingham, prepared schemes and embarked on the work. At the present time there are half as many men and women working in their own homes under the supervision of one or other recognised scheme as there are employed in workshops.

A work of such magnitude cannot be dismissed without some further explanation. Home workers, according to the 1919 Regulations, meant "adult blind persons who for sufficient reasons, are employed elsewhere than in a workshop in occupations usually practised in workshops, and are attached, for purposes of care, assistance and supervision to an approved agency." The definition is not a happy one, but it has been interpreted with a certain amount of elasticity, and persons engaged in the following occupations have been regarded by the Ministry as eligible for inclusion under a scheme: basket-making, brush-making, mat-making, boot-repairing, pianoforte-tuning, music teaching, tea-agencies, carpentering, hand and machine knitting, straw and string bag-making, rug and net making, wood-chopping.

The Scheme provides raw material at something like cost price to those who require it, keeps the work up to standard level and assists in the marketing of the finished goods. In occupations like tuning and music teaching the Scheme can assist by local advertisements, visiting-cards, etc., as well as by the more direct provision of orders.

The Ministry require to be furnished with particulars of each worker before sanctioning his or her inclusion on the register of the Scheme. It has also to be supplied with details of weekly earnings and on these figures it calculates its grant.

It has been pointed out that the care of the blind who are outside the walls of institutions has been fostered and stimulated by the Ministry. Their interest is shown in concrete fashion by the sanctioning of grants to agencies who render assistance to the outdoor blind to the amount of nearly £60,000 for the year ended 31st March 1929. On the other hand the service which earns the largest grant is that of workshop employment.

The Central Department had only been two years in existence when it called into partnership by legislative provision the Local Authorities of the country. Thus the many workers who had striven so earnestly to settle responsibility for the care of the blind on the shoulders of the municipal and county councils saw at last the fruition of their labours. The strenuous advocacy of competing Bills, the negotiations and canvassings of four years, were vindicated and the

gap in the 1917 Report made good by one far-reaching section: "It shall be the duty of the council of every county and county borough, whether in combination with any other council or councils or otherwise, to make arrangements to the satisfaction of the Minister of Health for promoting the welfare of blind persons ordinarily resident within their area, and such council may for this purpose provide and maintain or contribute towards the provision and maintenance of workshops, hostels, homes, or other places for the reception of blind persons whether within or without their area, and, with the approval of the Minister of Health, do such other things as may appear to them desirable for the purpose aforesaid. The council shall, within twelve months after the passing of this Act, prepare and submit to the Minister of Health a scheme for the exercise of their powers under this section."

This is the second section of the Blind Persons Act which was passed as a Government measure in August 1920, and it is characteristic that the preceding section should deal with the scattered and individual blind. It provides for the granting of pensions to blind persons on attaining the age of 50, at the same rates and on the same conditions as Old Age Pensions. In 1929 more than 17,500 blind men and women in England and Wales, and about 3100 in Scotland between the ages of 50 and 70, were in receipt of this subsidy at a cost to the nation of £518,000.

The third section of the Act applies the provisions of the War Charities Act 1916, with certain modifica-

tions, to all agencies making public appeals for subscriptions on behalf of the blind. This means that such an agency must be registered with the County or County Borough Council in whose area its office is situated and must submit its annual audited accounts to the same body. The Authority has the right to refuse recognition to an agency if it is satisfied that the work which the agency proposes to do is already being efficiently accomplished by an existing organisation.

As this Act is a prominent landmark in the history of work for the blind it may be desirable to give a few details of its passage through Parliament. The Bill was presented to the House of Commons by Dr Addison, the Minister of Health, on the 26th April 1920, and was read a second time on the 14th May. The Minister was congratulated by members of all parties on the benevolent intentions of his Bill, but the general feeling seemed to be that its provisions might have gone further without straining the cordial support of the country.

As the Pensions Clause (No. 1) required the passing of a money resolution, a debate took place in committee of the whole House on 25th June on this point. Again a striking unanimity was shown in favour of more generous treatment for the blind. No one was satisfied, and grim comparisons were made between the humble figure of £220,000, the estimated cost of the pensions, and the millions spent on Mesopotamia and in reclothing the Guards in scarlet. The alternative was

not so much between approval and disapproval as between vetoing the Resolution at the risk of losing the Bill and accepting it as a first instalment on the ground that the proverbial half loaf was better than no bread. Mr Baldwin, then Financial Secretary to the Treasury, told the House that no more money would be forthcoming, and with the aid of the Government Whips the Resolution was passed by a large majority. On the 21st July the Bill was put through its Committee stage. The Government were not altogether unmindful of the tone of the earlier discussions, and the most important amendment stood in Dr Addison's own name. This was to make Clause 2 mandatory instead of permissive. The clause as finally passed has already been cited. It may be of interest to quote it as it first appeared in Committee: "It shall be lawful for the council of any county or county borough to provide and maintain or to contribute towards the provision and maintenance of workshops, hostels, homes, or other places for the reception of blind persons within or without their area, and, with the approval of the Minister of Health, to make such further arrangements for promoting the welfare of blind persons as they may think fit, and two or more such councils may combine for all or any of the above purposes."

The tone of the discussion in Standing Committee was similar to that of the Chamber itself, and all the amendments proposed were aimed at strengthening the provisions of the Bill. Mr Stephen Walsh summed

up the attitude of the speakers in the various debates in his dictum: "Honourable as the attempt is, it is not as generous or courageous as the circumstances require." It must be remembered however, that, as is not uncommon, the enthusiasts for a root-and-branch policy were more vocal than their numerical strength warranted, and the silent majority looked on the Bill as a substantial and praiseworthy advance in social legislation. The third reading was taken on the 3rd August and the Bill went to the Lords on the following day. In the Upper Chamber the opportunity was taken of amending the draftsmanship in some particulars and of extending to twelve months the time given to local authorities for the preparation of schemes. The Bill was read a third time in the Lords on the 11th August and on the 16th of the same month it received the Royal Assent.

Section 2 has made a fundamental change in the administration of assistance to the blind. The duty of caring for them is laid on Local Authorities, while the Ministry insists upon a certain degree of uniformity of action. It is a new responsibility and its advent has coincided with a period of economy and financial stringency. The Councils are therefore cautious in accepting their obligations, and the situation is still far from having reached a point of equilibrium between the legitimate demands of the blind and the public provision to meet them. Already, however, much has been done, and in the year which closed on the 31st March 1929, the sum of £326,800 had been expended

by the Councils of Counties and County Boroughs of England and Wales and £61,000 by the Local Authorities of Scotland in various plans for the betterment of the blind.

It was explained in an earlier chapter that by the Education Act of 1918 direct Treasury grants to institutions in respect of pupils paid for by Local Education Authorities were discontinued. As a result, the institutions charged heavier fees to the Local Authorities who, in turn, obtained a Treasury rebate of 50 per cent. on all sanctioned expenditure. A change of a somewhat similar nature has been brought about by the Local Government Act of 1929. By it direct grants to agencies providing services for the adult blind will cease as from 1st April 1930, and the agencies will from that date derive their public subventions entirely from the County and County Borough Councils.

A block grant will be paid by the Treasury to Local Authorities in respect of all Welfare Services, the amount of which at the outset will probably be not less than the sum paid by the Treasury during the year 1928-9 under the old Regulations. This figure will be revised at fixed periods. Before the beginning of each fixed period a scheme will be made by the Minister of Health after consultation with the Local Authorities concerned, providing for the payment by those Authorities to agencies for the blind of such amounts as may be specified in the Scheme. Provision is made for some mitigation of this rule, in that it is

open to a County or County Borough Council to request the Minister of Health to pay grant direct to the agency.

Another direction in which the Local Government Act will affect work among the blind is in the transference of the Guardians' functions to the County and County Borough Councils. There was no provision in the Blind Persons' Act for absolving Boards of Guardians from their duty to relieve destitution, and many blind people continued to receive help from the Poor Law. At the same time, as has been pointed out, progressive Authorities gradually took over, in virtue of Section 2 of the Act, responsibility for financial assistance to the poor blind, so that the abolition of the Guardians by the 1929 Statute will do little more than give a useful fillip to a tendency already marked.

To the elaboration of machinery which has been so noticeable a feature of the blind world for the past decade, one further item must be added. The **Association of Workshops for the Blind** was founded in January 1929, for the purpose of providing a national organisation qualified to deal with industrial and commercial questions. It aims at being on the employment side of things what the **College of Teachers** is on the educational. Many problems await its immediate attention. The workshop system is not without its critics, and research into better methods of production and marketing is already overdue.

CHAPTER IX

FIGURES AND FINANCE

THE blind population of the world has been variously estimated at from two to six millions. This means an aggregate of suffering and deprivation that passes comprehension. In the countries where blindness is most prevalent, least is attempted in mitigation. Indeed, the recital of what is being done in Great Britain must sound like a Utopian dream to the social worker of India or China.

Even the size of the problem in these distant lands is unknown, while in Great Britain, particulars of practically every blind person are available. Elaborate statistics may be found in the Reports of the English and the Scottish Advisory Committees and so need not be introduced here. One or two figures, however, may be given to facilitate a bird's-eye view of the situation. Roughly speaking, the blind form a nine-hundredth part of the nation. In April 1929, the number known to the registering authorities in Great Britain was 61,243—in England and Wales 52,727, and in Scotland 8516.

Their distribution according to age was as follows :—

	England and Wales.	Scotland.	Total.
0 to 5 years. . . .	258	11	269
5 „ 16 „	2,438	283	2,721
16 „ 21 „	1,623	223	1,846
21 „ 50 „	13,901	2,085	15,986
Over 50	34,453	5,909	40,362
Age unknown	54	5	59
	52,727	8,516	61,243

In England and Wales alone 7482 were found to be suffering from some additional disability such as mental deficiency or deafness.

Although the preceding pages prove beyond all cavil that a great improvement has been brought about in the condition of the blind, much yet remains to be done. This is shown by the fact that the number of those actively engaged in some definite occupation is only one-third the number between the ages of 20 and 50 years. An analysis of the numbers employed in the principal occupations may be of interest :—

	England and Wales.	Scotland.
Basket-makers	1958	174
Musicians and piano-tuners .	887	115
Knitters	1066	71
Brush-makers	448	54
Mat-makers	725	77

Statistics of employment are fortunately changing so rapidly that they are quickly out of date, and their

main interest is that of being milestones on the road of achievement. The pace is quickening, and the day is not far distant when to each blind person will come surely and swiftly that particular assistance of which he stands in need. In pressing forward to that consummation each of the three great instruments, the Central Department, the Local Authority and the Voluntary Agency has its part to play.

The question is often asked, "Is blindness on the increase?" and it is comforting to be able to reply in the negative. At the same time it should be noted that registration, and the improved case work of the Counties' Associations, are bringing larger numbers to the attention of the appropriate agency.

That the number of the aged blind shows a distinct absolute increase is explained by the greater longevity of the general population in recent years. On the other hand, steady progress is being made in the prevention of blindness. The pitiable stream of infantile ophthalmia victims is drying up. Total abolition has not yet been attained but the situation to-day is distinctly cheering when contrasted with the fact that in 1910 over 12,000 English blind owed their loss to culpable carelessness on the part of those responsible for their welfare during the first week of life.

Ophthalmia neonatorum has been such a prolific cause of blindness that some further reference to it must be made. The infection is brought about at birth during the infant's passage to independent existence.

The eyelids become red and swollen, and from between them issues a dangerous discharge which causes the lids to stick together and imprisons the malignant fluid. This, in the course of a few days, works irreparable damage to the eyes. If medical advice and proper treatment are secured when the first signs of inflammation are noticed, all harm can be avoided. Ophthalmia neonatorum was added in 1914 to the list of compulsorily notifiable diseases, and this, with a salutary improvement in the training of midwives, and a great extension of the health services of the Local Authorities, have been responsible for the remarkable diminution in blindness from this source.

The amount of blindness from other phases of venereal disease is also being greatly reduced, so that before an undue length of time, the curse of the second commandment will have lost its virulence in this direction at least.

Glaucoma is now a curable disease if treated in its early stages, while the practice of a rigid asepsis has enormously increased the number of successful operations for cataract. Not only is more care taken by Local Authorities in the prevention and treatment of infantile ophthalmia, but better precautions against accident are being insisted upon in textile, metal and other factories. An additional power is given by the Public Health Act, 1925, to Local Authorities in England and Wales: "To make with the consent of the Minister of Health such arrangements as they may think desirable for assisting in the prevention of

blindness, and in particular, for the treatment of persons ordinarily resident within their areas suffering from any disease of or injury to the eyes."

In only one direction is the outlook disappointing. Myopia is on the increase, and no doctor has yet discovered either cause or cure. A moderate amount of myopia is rectified by glasses, and is of slight inconvenience in almost any walk of life. The seriousness of the disease lies in the fact that it is often progressive. The degree of short sight may increase rapidly. In that case, other morbid conditions, such as detachment of the retina, may supervene, and the sight be irrevocably lost. The recognition of the dangers of high myopia has led to the establishment of special classes, known in America by the self-explanatory name of Sight Saving Centres, wherein children suffering from this complaint are taught by means expressly designed to avoid eye-strain. In this country, Dr Bishop Harman, of London, has done pioneer and vigorous service in the opening of such schools.

Two-thirds of the blind of the nation are over 50 years of age, when training is, for the most part, impracticable, and when the most natural form of assistance is a monetary grant. Reference has already been made to the large sum spent by the State in this way, and it may be useful to look for a moment at those charities which help the blind along similar lines. There are in all about 75 Pension Societies in the country, of which 24 have their offices in London.

The amount of money distributed annually is nearly £54,000, and the number of recipients is about 6200. The oldest pension funds of any note are probably those administered by the **Worshipful Company of Clothworkers** in the City of London, which now benefits in this way some 1250 persons. Among its funds for this purpose are sums left as far back as 1718. The largest single bequest was that made by Charles Day, of the bootblackening firm of Day & Martin, in 1834, by which he set aside £100,000 to be distributed in annuities to the necessitous blind.

In 1774 the Rev. William Hetherington made a gift to **Christ's Hospital**—of which he was a Governor—of a sum sufficient to subsidise 50 persons at the rate of £10 a year. His generous action was imitated by subsequent Governors, and now the Hospital has 800 pensioners on its list.

Gardner's Trust, to which allusion has already been made, distributes each year just under £3000 to 225 annuitants, while the **Royal Blind Pension Society** has 1300 beneficiaries on its books at figures varying from £6 to £15 a year.

These notes on pensions lead to a question of more controversial nature, that of the advisability or otherwise of giving pecuniary assistance to the adult blind as a direct compensation for their disability. In a Reservation to the Departmental Report of 1917 three members felt it would be well for "the State to recognise the handicap under which the blind persons suffer and to make a suitable allowance to

all blind persons above the age of 21 who are not unworthy of assistance and who have no sufficient private means of support. . . . Any refusal to undertake training or suitable employment might involve the forfeiture of the pension. Street begging, crime, drunkenness would also lead to its forfeiture."

The idea was revived some six years later by Mr Stone of Edinburgh, and is set out in the Report of the Scottish Advisory Committee for 1924. The suggestion was that a grant of not less than £1 per week be made to each blind person, employable or unemployable, over the age of 16. If income exceeded £105 a year the grant was to be proportionately reduced, disappearing when income reached £200.

"We are of opinion," says the Report, "that the adoption of the principle of a compensation allowance to blind persons over school age as recommended by us would

- (1) greatly simplify the question of maintenance during technical training;
- (2) encourage many blind people to embark on private trading with good prospects of success;
- (3) enable more suitable blind men and women to enter professional callings;
- (4) lead to workshop employment being reserved for really capable workers;
- (5) save persons who become blind in middle life having to apply for poor law relief;

- (6) solve the problem of the necessitous and unemployable blind, and make the provision of Homes for the aged and infirm more possible."

If the Committee are right in thinking that the grant would restrict workshop employment, they would seem to be arguing against their own proposal, for, although the removal of the semi-competent from the shops would be a relief to the management, it would not be in the best interests of the blind. It is better that the blind should contribute to their own livelihood even when the proportion is small. That the compensation allowance, if it were to come into operation, would have large reactions on the workshop situation is clear. In no direction would this be more noticeable than in the abolition, which would almost certainly follow, of the payments known as augmentation of wages. This phrase, so constant a refrain in all discussions on the industrial side of blind affairs, is doubtless less familiar to the lay reader and, in its special reference, may well call for a few words of explanation. The wages in most of the trades followed by the blind are paid in accordance with piecework rates and not at so much an hour like carpenters or labourers. This custom of the trade is followed in the case of blind workers, but owing to their handicap the average amount earned is much lower than the average of a seeing operative. This is the only payment to which the blind worker is entitled as an

economic return for his labour, but, as it is insufficient, a grant is made to supplement his earnings. Such a supplement or augmentation has no place in the trading account of the workshop. It is not wages but has a strong similarity to the "compensation allowance" of the Reservation and Report. The amount of augmentation varies in different workshops. The Ministry of Health has given its blessing to a sliding scale in which the augmentation falls as wages rise. The present system of piecework rates plus augmentation is disliked by many of the workers who argue that the blind should be paid "at a rate of remuneration not less than the average standard rate received by an unskilled labourer in the district," irrespective of the amount of work done. The whole question is one of much complexity, and more detailed consideration would be out of place in a brief outline of this nature.

It is clear from the above, however, that the employed blind may be said to be already in receipt of a compensation allowance, while Local Authorities are coming to the aid of the unemployable, and are gradually accepting the principle that a subsistence level of some sort should be maintained at their expense. In some areas the income of every blind person living alone is made up to 20s. a week. In other districts the income is augmented to 25s. or more. These variations are inevitable under a system of government in which nearly two hundred Authorities determine their individual policies.

The rapidity with which the situation is changing may be gathered from a comparison of the following paragraphs. The first is taken from the 1926 Report of the English Advisory Committee and the second from the 1929 Report of the same body.

In 1926 the Committee wrote: "A considerable number of Local Authorities have now made definite arrangements for the financial assistance of unemployable blind persons living in their own homes, and it is encouraging to note the progress that has been made. . . . There are, however, still many areas in which no attempt is being made to meet the financial requirements of this class in a systematic way, and looking at the matter in its broad national aspect we cannot yet say that we are satisfied with the provision made for this class." Three years later they were able to say: "We are particularly pleased to note the large increase in the assistance given to the unemployable blind, and also the steady increase in the assistance given by the Local Authorities to the employment services (Workshops and Home Workers). One of the most important developments under the Act during recent years has been the increased consideration given to the circumstances and requirements of those blind persons who are not employable in an economic sense, and it is understood that in some sixty areas the Local Authorities have now arranged, either alone or in collaboration with Voluntary Agencies, to bring the income of each unemployable blind person up to a definite amount." The first steps have been taken,

however, and these are sufficient to show the direction of future advance. Supplement by Local Authorities after full inquisition into earnings is a more likely solution than an unvarying allowance from the State, unless the advocates of the latter scheme can win over a public opinion which is still apathetic.

The payment of augmentation is assisted by the capitation grant of the Ministry, but this item of expenditure is a heavy drain on the charitable funds of those institutions which provide workshop employment, and strenuous efforts have to be made to secure sufficient support from the public. Their difficulties in this direction, indeed, bulk so prominently in the affairs of the blind world to-day that although the problem bristles with controversial aspects, a recital of some of the outstanding facts must be attempted.

Reference has been made in an earlier chapter to the advent in 1913 of Sir Arthur Pearson to the world of the blind, and to the impetus which he gave to the resources of the **National Institute**. Very soon the War turned his main energies to the care of the soldiers and sailors who lost their sight in battle and to the raising of funds for that purpose, but the **Institute** was closely connected with that project, and shared in the golden harvest which was reaped from the irresistible appeal of the blinded warrior. A large publicity organisation was rapidly built up, and in a short time the whole country was covered. Its financial success was unprecedented, and the **Institute** received from the public an extraordinarily generous response

apart altogether from the money which flowed into the coffers of the Soldiers' Hostel at St Dunstan's. This created a situation probably unknown till then in any field of philanthropic effort, in that resources greatly outstripped needs. The **Institute**, therefore, made substantial grants to local institutions, and cast about for new items to add to its programme of work. **Worcester College** was generously subsidised. A Home for blind babies was opened at Chorley Wood in Hertfordshire, and a **College for Blind Girls** was later started in the same district.

This novel incongruity between means and necessities, coupled with the fact that the money was being raised in districts where previously local institutions had known little competition, gave rise to feelings of widespread dissatisfaction and resentment. In April 1920 these feelings had become so general and so insistent that a conference of representatives of institutions and societies was called together in Clothworkers' Hall, "to consider as to the desirability of centralisation and unification of all collections made on behalf of the blind." Sir Arthur Pearson was spokesman for the **Institute**, and made it plain that while it was willing to act as fairy godmother to any agency it would brook neither control nor interference. Shortly after the meeting a Committee was formed to consider the question further, but for some time little progress was made. In December 1921, Sir Arthur Pearson's vivid career came to its abrupt close, and the whole situation was materially altered. A Committee under

the Chairmanship of Dr P. M. Evans of the **Cloth-workers' Company** brought out a scheme which after many changes was made acceptable to most of the organisations for the blind in the country. It was an ambitious and far-reaching plan, broadly conceived and carefully worked out in detail. It was inevitably somewhat elaborate because the situation with which it undertook to deal was complicated, but the elaboration was not more than that situation required.

It contemplated the setting up of a Central Representative Council of forty-five members with wide powers. This Council was to scrutinise the budgets for "national services" and to act generally as a court of appeal. The country was to be divided into eight areas, and in each a representative Committee was to have full control of the raising and allocating of voluntary funds, with the proviso that a first charge was to be a reservation for national services. "National" services have been defined as services which are generally for the benefit of the blind of the country or for a section of the blind who are scattered over the country and which can be conducted more economically and efficiently by one agency on a national rather than on a local basis. Among such generalised services are, for instance, the printing of books or the maintenance of a National Library. The amount of the reservation was to be fixed by the Central Council on the basis of the comparative population of each area. As has been said, most of the voluntary agencies concurred in the scheme, but defeat lay in wait. The

Institute had been friendly and its representatives had taken part in most of the discussions, but in the end it broke away and refused to have anything to do with it. No further attempt at a solution was made till 1926, when a much less ambitious scheme was drafted by the Advisory Committee of the Ministry of Health and accepted by the **Institute**. By this plan the Council of the **Institute** was increased by seventeen representative members, and the Council thus enlarged was to overhaul its Articles of Association with a view to increasing still further the number of such members. The kernel of the scheme lies in the provisions of Paragraphs (7) and (8), which may be given in full:—

“(7) That the Council of the Institute, expanded in the manner referred to above, should at once proceed to open negotiations with local Voluntary Agencies for the Blind with a view to the framing of collecting agreements. Wherever possible the local Voluntary Agency should be encouraged to take over and assume full responsibility for the whole of the collecting machinery in the area, and to remit to the National Institute an agreed percentage of the net local collections for its national services. Where it is not practicable for the local Agency to take over all collecting machinery the Institute should endeavour to make agreements whereby in co-operation with the local Agency they will themselves undertake responsibility for the collection of monies and allocate the net proceeds in such proportions as may be jointly agreed upon for local and national services respectively.

"(8) That a Board of Arbitration should be established by the Minister of Health, acting on the advice of the Advisory Committee on the Welfare of the Blind, to settle any disputes that may arise in the matter of collections as between Agencies conducting local and national services, and that all Agencies making agreements for collecting purposes should accept the decision of the Arbitrators as final."

A considerable number of Collecting Agreements have since been made on the lines of Paragraph (7). Where the local agency has taken over the raising of funds, the proportion of net proceeds reserved for "national" services is usually 20 per cent. Where the machinery of the **National Institute** is in operation the reservation is 5 per cent. more. This is an improvement on the previous unregulated competition, but it cannot be regarded as more than a stepping-stone to any real solution. Dr Evans' scheme had the great merit of stipulating for a Central Council whose decisions on budgets for "national" services and other vexed questions would have been impartial, authoritative and final. The present plan lacks this control. Now, although any surrender of individual sovereignty is a distasteful morsel for both charities and nations, some self-denial in this direction is an essential preliminary to a stable peace. Unification should mean not only the avoidance of overlapping in the money-raising machine, but the allocation of the proceeds in such proportions and in such directions as the needs of the blind are most acute. No attempt

has ever been made to justify by figures the 20 or 25 per cent. above mentioned. The ratio is rather an index of the bargaining strengths of the contracting parties than a reflection of the comparative costs of "national" and local services.

The next step would seem to be the scrutiny of the demands which "national" services can legitimately make on charitable funds. The bits of work which cannot be laid to the charge of this or that definite area are small in number and manageable in scope. The maintenance and extension of a National Library is one of these. The printing of books and the manufacture of apparatus are others. The provision of higher education to blind girls is national service, for only one school of the kind is required. The care of blind babies and the provision of holiday homes, etc., are now being undertaken by the **National Institute for the Blind**, though it might be argued that such work might be more effectively administered on a territorial basis. That is a matter of small moment. What is vital is that the cost of such services, less revenue from grants, sales, fees, etc., should be accepted as reasonable by a qualified judiciary body, and then allocated among the several areas of the country as a first charge on charitable funds. It is not a large reform to sigh for, and yet its results would be magnificently disproportionate. They would include the redressing of the present lack of balance, the removal of one persistent cause of jealousy and discontent, and the restoration of harmony to a

field of labour where discord is more than ordinarily out of place.

It used to be said by opponents of State aid that the receiving of Government grants would dry up the wells of charity, and that voluntary funds would consequently dwindle. It is therefore interesting to note that at the present time more money is being raised for work on behalf of the blind than ever before. It is, however, probably fallacious to see any causal connection between this increase and Treasury subventions. Money-raising is, to an increasing extent, being recognised as a business for specialists. The more efficient the publicity organisation the greater will be the sums raised. The War has made far-reaching changes in the distribution of surplus wealth. The old regular subscriber to good causes was the well-to-do *rentier*, who considered it a duty to his conscience and the community to spend a proportion of his income in this way. The rise in the cost of living, the fall in stocks, and the additional burden of a heavy income tax have made a continuance of his giving impossible. The men who now have the money have not inherited the traditions of benevolence. They can and will give generously if an appeal strikes home, but they do not make an orderly allocation of surplus guineas in well-considered precedence, nor have they the smallest use for a Banker's Order. Thus, most charities for the blind find that annual subscriptions are a diminishing factor in their income, and that to secure a compensating increase in donations, recourse must be had to new and

necessarily more expensive methods. Funds are now reckoned as cheaply secured if only 30 per cent. has to be deducted for expenses.

Such considerations are, however, of a technical nature. The bold, outstanding feature of the situation is, that from national, local and charitable sources, the agencies for the blind are receiving a steadily increasing stream of financial support, and every phase of the problem is advancing gradually to its adequate treatment and solution. It may be a fitting close to this survey of the slow growth of organised effort on behalf of the blind to look at the working of the intricate organisation that has now been built up as it comes to the aid of a blind person in the successive stages of his life.

Few children are born blind, and the prevention of blindness in the first few days of life is making steady headway. If, however, the machinery of early notification and treatment has for any reason failed and a blind infant is added to the population, it is the business of the County Association to get into touch with the parents as soon as may be and to have the child added to its Register. In Scotland the Outdoor Mission is the appropriate body to secure contact, and it will be remembered that in that country the Register is kept centrally by the Department of Health. In the first instance the visits to the home will be paid by the Health Visitor under the Local Maternity and Child Welfare Scheme. With this scheme the Local Association for the Blind should be closely in touch,

and the Health Visitor will be followed by the Home Teacher. By these means the mother is given sound advice in the care of her child. If the home circumstances are undesirable the Association will seek to transfer the infant to one of the Sunshine Homes established and maintained by the **National Institute for the Blind**.

At the age of 5, admission to a school for blind children must be sought. It is imperative that the home teacher should see that no time is lost in this important particular, and that the Local Education Authority is persuaded to accept its share of responsibility directly school age is reached.

From 5 to 16 years the blind child will receive a sound elementary education, and during the closing years of this stage may spend a few hours weekly in training for the occupation at which it is hoped he will eventually earn his living. From 16 to 20 this occupational training will take up most of his time, but more general studies with cultural value will not be entirely discarded.

On the completion of training, it remains the duty of the appropriate institution, usually the one which has provided the training, to find employment, either in a workshop or under a Home Workers' Scheme, for the competent young artisan or musician. By this means the blind man or woman will be enabled to support himself, in some cases partially and in most wholly, and so will take his rightful place as a self-respecting member of the community.

The activities of the Home Teacher again come into play when blindness occurs at an age which makes training and employment impracticable. As has been already seen, this group includes the majority of the blind in the country. Here the Home Teacher's ministrations are of the greatest value. By precise knowledge, wide experience and inexhaustible sympathy, she can bring sunshine and practical help into many a darkened home. Her advice on questions of compensation, insurance, pensions and the like will be gratefully followed, while her lessons in embossed reading and pastime occupations will relieve the numbing pressure of aimlessness and restore the happiness of well-filled leisure.

To the man or woman to whom loss of sight comes in middle life, the Home Teacher is again the first to bring consolation and practical advice. By her efforts the road to training and employment is opened, and in a few years the man on whom the curtain of lifelong darkness fell with paralysing horror may be heard singing at his work.

Blindness is a severe disability, and even with all the help, both State and charitable, both paid and voluntary, that is ready to be placed at his disposal, the blind citizen who makes good is one of whom his country should be proud. He who overcomes such a heavy handicap has helped to raise the stature of humanity, and has contributed living evidence to the dominance of mind over matter. Henley's well-known stanzas too often ring flat with a certain forced air

of bravado. They lack a sense of proportion, and remind one of the childish attitude of Ajax defying the lightning. All the same, if anyone can lay claim to turn them to his own use, it is surely he who, having known the light, has disciplined himself to walk with fortitude the unseen way before him. Such an one who, in manly cheerfulness, can keep his heart warm and his muscles taut, is entitled to repeat in unaffected honesty—

“Out of the Night that covers me
Black as the pit from Pole to Pole,
I thank whatever gods there be
For my unconquerable soul.”

CHAPTER X

VISUALISATION AND ITS ABSENCE

AS an organic creature, man lives by means of his senses. His daily life is one long and complicated chain of responses to their stimulation, while his education and development are mainly the incorporation of their messages into the stuff of character and personality. If all reactions to the sense of sight are eliminated, the resultant being will necessarily differ from the ordinary man. To discover and set down these differences is a task of extreme difficulty, but must be to the student a fascinating field for speculation and research.

In the middle of the nineteenth century there flourished a pseudo-science called phrenology. The human cranium was partitioned out among the various manifestations of intellect and emotion. Intriguing plaster casts could be purchased with the appropriate label upon each bump and promontory. Combative-ness, philo-progenitiveness, veneration and so forth had each its appointed region. Once the topography of the skull was learned, a man's character and predilections, it was asserted, could be assessed by the fingers. The faculty-psychology which gave a semblance of reality to its absurdities is still extant in common

speech, but phrenology itself is out of fashion. Later investigations have had results which are quite as marvellous as those claimed by phrenology, though they lie along different lines. The brain is now known to be the centre to and from which the nerves of the body find their way, and its cortex is concerned in some mysterious manner with the management, supervision and control of the sensory life of the individual. The mapping-out of the various regions is still incomplete, but it was discovered at a comparatively early date that the occipital lobes, or that part of the brain which lies to the back of the head, were connected with optic sensations. When this portion of the brain is injured, even though the eye and the optic nerve remain whole and untouched, blindness, either total or partial, ensues. Not only so, but the effect of extensive damage is to bring about mental as well as physical blindness. The power of recollecting visual impressions and of constructing fresh pictures in the mind is destroyed. To be able to see properly, the eye, the optic nerve and the occipital lobes must all be in working order.

A few more words on the apparatus of sight may not be out of place. They are only intended to remind the reader of facts that everyone knows, and should not prevent him from pursuing the subject elsewhere in more thoroughgoing fashion. The human eye is almost spherical in shape with a diameter of about one inch. When dissected it is seen to be made up of three concentric membranes. These are the sclerotic,

the choroid and the retina. In the front of the eye the white sclerotic coat becomes transparent and more convex. This is the cornea. The choroid or middle membrane is dark in colour, and in the front of the eye it becomes the iris, a thin flat curtain, perforated in the centre by the pupil. Behind the pupil is the crystalline lens, the refracting medium by which the rays of light are focussed on the retina at the back of the eye. About one-eighth of an inch from the central point of this region there enters the optic nerve which then opens out to spread over the inside surface of the choroid in a thin, semi-transparent sheet of nervous matter. This is the retina, a tissue of extreme complexity which receives visual messages from the outside world for transit along the optic nerve to the brain. The lens is double convex, and is connected by fibres to muscles which can alter its convexity and so regulate its focal length. The elasticity of the lens diminishes with age, so that when a person with normal vision reaches middle life, convex spectacles are required to bring the focus to the customary twelve inches or so at which reading and other close work is most comfortable. In persons suffering from myopia the eye is too long from back to front, so that concave spectacles are required to secure correct focalisation.

It must be remembered that, apart from sentient mind, the universe is absolutely dark. The world of brightness and shade, of line and colour, is the interpretation given by the eye and the brain of man.

What corresponds to this in objective reality is a range of tremors in the omnipresent ether. The gamut of these tremors is extraordinarily large. Scientists have succeeded in measuring wave-lengths which vary from the fifty-millionth of a millimetre to nearly five miles. It is only a four-hundred-millionth part of this scale that finds in the human eye a responsive instrument, but from that response the whole visible universe springs into being. The wonders of sight are amazing. The beauty of a flower, the majesty of a mountain panorama, the solemn grandeur of a starlit night at sea, the happy familiarity of a loved one's face, all may give rise to emotions so keenly exquisite as to turn pleasure almost into pain, and yet human sense is tuned to catch only an incredibly small portion of the radiations that are constantly quivering through space. It is little wonder that writers of restless curiosity, like Voltaire, have dreamt of beings with hundreds of senses. The notion is credible enough, but the unfortunate fact remains that the nature of such additional powers must continue to be a closed book to the comprehension of a five-sensed mortal. The man who possesses the power of seeing has also the power of storing up images, memories of things seen, of recollecting these at will and of forming from them new pictures. He can recombine the elements of line, form and colour in infinite permutation. He can construct in the mind a lively presentation of tropic forest or Antarctic waste without ever having been outside his native shores. All that is done in

such mental exercises is to arrange familiar elements in unfamiliar combination.

The case of a man who from early years has been incapable of the sensation of sight through defect in optic apparatus or in brain is very different. This is a point which is of importance to the teacher of blind children, and so it may be well to re-enforce the statement by an approach from another angle. Suppose Voltaire's planetary visitor was expatiating on the wonders of his fifteenth sense and trying to make his meaning clear to a listening Terrestrial. He might say, "It deals with impressions of salcydrith, interpreting a vast range from superb ghinkoms to the equally exquisite though totally different seindal." The Terrestrial is not a whit the wiser. He is, however, in a precisely analogous situation to that of a congenitally blind man who is told that sight deals with colour and that these range from violet to red.

Unless the sense mechanism is there and can be set in motion by the appropriate stimulus, no real impression can be conveyed to the mind. "The mind," says Locke, "can frame unto itself no one new simple idea." "No mental copy can arise in the mind, or any kind of sensation which has never been directly excited from without. The blind may dream of sights for years after they have lost their vision, but the man born blind can never have a mental vision" (William James). "If a person has never experienced one or other kind of sensation owing to imperfection of the corresponding sense organs, or loses the use of one of his senses at an

early age, if for example he is born blind, or loses his eyesight before his third year, he becomes incapable of experiencing the corresponding imagery" (William M'Dougall).

In the daily life of the ordinary human being it is difficult to exaggerate the part played by sight and its concomitant visual imagery. Many years ago Galton made experiments which showed that the degree of vividness of this imagery varied greatly in different individuals, but even those with feeble powers of visualisation depend upon the sense of sight to an enormous extent. It is not too much to say that most people regard life from the standpoint of vision. Their world, whether seen or remembered, is a realm of shapes and colours. Rumination upon even a concert or a dinner is visual. From the recollected scene are abstracted by intellectual process sensations of sound or taste. In other words, not only does the ordinary man discern objects by sight and remember them by visual memory, but everything that claims his attention is seen or remembered upon an ever-present visualised background.

Instead of sight and pictorial memory the blind have muscular and tactual sensations and images. To the average man tactual images can be little more than a phrase. Any image of this sort which he may form is at once jostled out of the focus of attention by the overwhelmingly vivid pictorial representation. Such language may not be puristically accurate. Images are composite affairs—component factors from

several senses go to build up the totality. The concept of a railway train may be an amalgam of sight and sound suffused by an impression of power in motion, but it is possible to separate out these factors and to consider each in turn. It is nevertheless true that where an image contains elements drawn from sight and touch, the visual aspect is so preponderating that the tactual is barely susceptible of isolation. The blind man's images of objects are always tri-dimensional; the ordinary man's are seen and remembered upon a plane background and must be over-ridden and corrected by his knowledge of the third dimension. From this constant factor of a plane background in the mental constitution of the normal man has come the pictorial arts, and from these, in turn, an elaborate convention of interpretation. To the initiated a picture instantly conveys its message, but to a person who had never before set eyes on such a representation the meaning would be obscure if not altogether lacking. Failure to grasp the significance of this has been responsible for the repeated attempts that have been made to emboss pictures for the blind. These have been done either in shallow block relief or by raising the outlines only. An early effort in this direction can be seen facing page 49 in the drawing of Glasgow Cathedral. Another example will be easier for more detailed examination. The simple outline of a fox, for instance, is embossed. The profile of the figure can be followed round by the finger. To a person with sight the intention of the artist is clear. The general foxiness

of the animal has been admirably brought out by these few lines. There is no mistaking his identity. To the plodding finger, on the contrary, there comes no pleasant glow of recognition. "It's a map of some sort," says the baffled student, "but I don't know what country!" The idea of a fox which a seeing person carries about with him is pictorial. Again and again the animal has been photographed on his retina. Since the original image has been seen as lines or masses of colours on a flat background it can be reproduced in the same way. Even here, however, especially in the case of line drawings, there has been a long familiarity with diagrammatic language. The line does not create the image unaided. It suggests a suitable train of recollections in the mind, and by associated suggestions, produces the impression of a life-like fox. It is, indeed, somewhat disconcerting to find how large a part in seeing is played by the mind rather than by the eye. If a blind man has a first-hand idea of a fox, it is a recollected complex of the feel of fur, of a definite shape, size, weight and odour, and it is obviously working in a mistaken medium to try to stimulate into consciousness this recollection by embossed lines on a sheet of paper.

The concepts that are derived from tactile perceptions are more literal, more unchanged by the interpenetration of thought than are concepts from sight. The mind does not need to weigh the evidence to such an extent. Its judgments are simple and unambiguous. Its interpretation is clear and direct.

The sense of touch is close to reality. It is, as it were, more elemental than sight. Sight, on the other hand, is the latest and the most highly evolved of the senses. It is the most delicate, the most subtle of all organic instruments for the scrutiny of the external world. As a consequence it is of all the senses the one which depends most on mental correction and adjustment. The line of demarcation between physical perception and the mental assessment is not, at first glance, easily recognised. Even an astute psychologist like Sherlock Holmes can be found at fault. The following passage from Sir John Adam's *Herbartian Psychology* will be familiar to many teachers:—

“‘Observation shows me that you have been to the Wigmore Street post-office,’ says Sherlock Holmes to Dr Watson. From his own implied definition of the term, this is not so. What he ought to have said is what he says a little further on: ‘Observation shows me that you have a little reddish mould adhering to your instep.’ He puts the deduction in the wrong place. It begins sooner in the process than Holmes admits. He did not observe Watson going into the post-office; he deduced this action from the red mould that he did observe. This mistake as to the precise limits of observation and deduction is continually being made, and is the cause of much of the confusion that marks writing on this subject. Nor is this to be wondered at when it is remembered that the limits of the two processes vary with the individual. For example, Holmes in a sense may be said not to have

observed the red mould, but to have inferred it. What he did observe was a reddish stuff. From his previous experience of the stuff usually to be found on boots, he inferred that this stuff was mould. In the ultimate resort all that any one can observe with the eyes are certain more or less irregular patches of colour. It is not necessary to go all the length with Binet, who maintains that all our interpretations of the ultimate elements of sense impression are rapid, unconscious, logical inferences. It is enough to recognise that the point where conscious inference begins varies with the individual."

The extent to which the sense impression of sight has to be modified and confirmed by the intellect makes possible many mistakes which are puzzling to the blind. They find it difficult to understand the misapprehensions that occur, and are sometimes led to put an enhanced value on the more pedestrian but less elusive impressions of touch. "My hands," said Diderot's blind man, "would inform me better of what is doing in the moon than your eyes or your telescopes." This is not an uncommon attitude for a blind man to take up, and so little can the privilege of sight be explained, that educated and efficient blind men have been heard to declare that if sight were offered to them they would decline it. To such critics, sight has the air of being unreliable and treacherous. If it were not so, says the blind man, why should visual hallucinations be so common? In the grey dawn, a dressing-gown on the bedroom door may assume the aspect of

a ghostly spectre, with enough venom in its appearance to make the hair stand upon the head. Bishop Berkeley tells somewhere in his writings of a mistake made in the misty light of a frosty morning whereby a bird on a fence close at hand was thought to be a distant rider on horseback.

Would not incidents like the following prove mystifying to a man accustomed only to the close realism of tactual sensations?—Far out in No Man's Land a British officer lay prone in a shallow pit. His face was the colour of mud and his hair appeared to have changed into waving tufts of rye-grass. He was engaged as he had been for the best part of three days in gazing fixedly through his binoculars at the white walls of an orchard fifteen hundred yards away. From that direction, if any, must the next German attack debouch up the intervening valley. All was still and peaceful. Even to the observer's strained attention there was no sign of life, no flicker of activity. Suddenly the hand that held the glasses shook. Something incredible was taking place, or else, broken with incessant vigil, the soldier was losing his reason. A creature of hideous aspect and of enormous proportion was slowly rearing itself against the distant whitewashed wall. It was vast, monstrous and appalling, more unnatural than a plesiosaurus, more frightful than the dragons which in his illustrated *Faerie Queene* had scared him as a child. At what new devilry were the enemy now? The glasses wobbled down from his amazed eyes and the explanation lay before him.

Just a few inches from his face an aspiring earwig was crawling up a blade of grass.

Illusionists, as the name implies, spend their time in trading on the fallibility of sight. Again, if a group of people be asked to state the size of the full moon in an autumn sky, the replies will be surprisingly incongruent and may range from a penny to a cart-wheel. It is not easy to explain such variations to a blind person without grave risk of creating in his mind some disparagement of the missing sense.

Though thus, in many ways, the man with sight may be the sport of his most cherished sense, the blind man might hesitate to assume too patronising a tone if he reflected that the mind enters into all sense impressions, and that mistaken interpretations are not unknown in other senses than sight. William James tells of a summer evening when he sat working in his study. He heard the mutter of distant thunder, but when he looked out to see the approaching clouds he found the sky clear and tranquil. Again the ominous growl brought him to the window, but again no sign of storm. It was then he noticed his little terrier asleep on the hearth and snoring lustily. The story is a close parallel to that of Bishop Berkeley's and may help to make more reasonable to the blind occasional slips in visual deduction. Experiments to demonstrate the untrustworthiness of one's normal interpretation of the sense of temperature and even of the sense of touch itself are too familiar to call for citation. The fact that more errors are made in the

interpretation of sight impressions is of course a tribute to their wide diversity and enormous range. The mental content must be full and elaborate if correct deductions are to be made. From this it follows that to achieve unfailing accuracy in this interaction of mind and sense one must have a substantial body of knowledge at one's call, and on a more primitive plane one must literally learn to use one's eyes.

This learning is normally done in the early days of life. It is a gradual process, and to most adults it passes unobserved. By the time the baby can explain his difficulties and his impressions he has also learned to manipulate and order his sense mechanism. Even so, it is common knowledge that the infant thinks he can grasp the moon. Men only do so metaphorically.

That the use of the eye is not an accomplishment that comes ready-made is proved, if proof were needed, by instances of people who have started life as blind and have been given their sight at a later date. Two instances from Carpenter's *Mental Physiology* are worth quoting: "Jemmy Morgan has been successfully operated on for cataract. In a few days both pupils were almost clear; and it was obvious from his actions that he had distinct visual perceptions. But though he clearly recognised the *direction* of a candle or other bright object, he was as unable as an infant to apprehend its *distance*; so that when told to lay hold of a watch, he *groped* at it, just like a young child lying in its cradle. It was *very gradually* that he came to use his sight for the guidance of his movements: and when

going about the house at which he was staying at Bristol, with which he had familiarised himself before the operation, he generally *shut his eyes*, as if puzzled rather than aided by them. When he came up to Mr Estlin's house, however, he would show that he was acquiring a considerable amount of visual power, and it was his favourite amusement there to blow about with his breath a piece of white paper on the surface of a dark mahogany table, round and round which he would run, as he wafted the paper from one side to another, shouting with glee at his novel exploit. Nevertheless, when he returned *home* to his father's house and farm-yard, his parents (very intelligent people) remarked that he was for some time obviously puzzled by his sight, *shutting his eyes* as he went about, in his old way; though whenever he went to a *new* place, he was obviously aided by it. But it was several months before he came to trust to it for his guidance as other children of his age would do."

The second instance is that of a young woman, who had also been blind from birth: "She was never able to ascertain what an object really was by sight alone, although she could correctly describe its shape and colour; but that after she had once instructed one sense through the medium of the other, and compared the impressions conveyed by touch and sight, she was ever after able to recognise the object without touching it. In this respect her memory was very perfect. It was curious to place before her

some very familiar object that she had never compared in this way, such as a pair of scissors. She would describe their shape, colour, glistening metallic character, but would fail in ascertaining what they really were until she put a finger on them, when in an instant she would name them, and laugh at her own stupidity, as she called it, in not having made them out before."

A third illustration of the same phenomenon may be quoted, but it is to be feared that it is of interest chiefly as a literary curiosity. Its scientific accuracy is dubious. It appeared in *The Tatler* of the 16th August 1709: "It may not be unuseful to relate many circumstances which were observable upon a late cure done upon a young gentleman who was born blind and on the twenty-ninth of June last received his sight at the age of twenty years by the operation of an oculist. . . . All his acquaintance who had any regard for the young man or curiosity to be present when one of full age and understanding received a new sense, assembled themselves on this occasion. . . . Among several others, the mother, brethren, sister and a young gentlewoman for whom he had a passion, were present. When the patient first received the dawn of light, there appeared such an ecstasy in his action, that he seemed ready to swoon away in the surprise of joy and wonder. The surgeon stood before him with his instruments in his hands. The young man observed him from head to foot; after which he surveyed himself as carefully, and seemed to compare him to himself; and discerning

both their hands, seemed to think they were exactly alike, except the instruments, which he took for parts of his hands. When he had continued in this amazement some time, his mother could not longer bear the agitations of so many passions as thronged upon her; but fell upon his neck, crying out, 'My son! my son!' The youth knew her voice, and could speak no more than, 'Oh me! are you my mother?' and fainted. The whole room, you will easily conceive, were very affectionately employed in recovering him; but, above all, the young gentlewoman who loved him, and whom he loved, shrieked in the loudest manner. That voice seemed to have a sudden effect upon him as he recovered, and he showed a double curiosity in observing her as she spoke and called to him; until at last he broke out, 'What has been done to me? Whither am I carried? Is all this about me, the thing I have heard so often of? Is this the light? Is this seeing? Were you always thus happy, when you said you were glad to see each other? Where is Tom, who used to lead me? But I could now, methinks, go anywhere without him.'"

As might have been surmised, these instances show that to those who thus receive their sight the world becomes a strangely, a bewilderingly, different place. Speaking generally, objects appear to their newly acquired sense much larger than they had before imagined them. They see men as trees walking. "It might very well be a horse," said a patient cured of congenital cataract when a ten-litre bottle was held

up a foot from his face! A man suddenly gifted with sight feels lost in an unknown country, and shrinks from the humiliating and dangerous process of learning to live by sight. It is a slow business to get the mind so stored with pictorial content that each new impression that invades his retina will call up its fitting interpretation. Only gradually will his faculty of vision change from being a strange and rather terrifying intrusion on the accustomed tenor of his life, and become the most glorious and the most treasured of all his sense powers.

Not only do objects appear larger but they appear nearer than anticipated. If a blind person were enabled suddenly to use his eyes, he would feel oppressed by the unexpected proximity of his surroundings. He would feel that the walls of the room were closing in about him, that his companions were crowding upon him. Conversely, there is an isolation in the lot of the blind man only occasionally grasped by the seeing. So long as there is silence and no actual physical contact, the blind man is alone, in a sense and to a degree unknown to those possessing sight.

It is not difficult to see how this isolation is an aggravating factor in the mannerisms of blind children and adults. The ordinary child feels himself to be under the eye of the teacher, and is also a constant spectator of the behaviour of others. Example is proverbially more potent than precept, and it is to the disadvantage of the blind child that he must be guided

so largely by the less effective method. Indulgence in a mannerism such as rocking the body or shaking the fingers gives relief to some obscure desire for movement, and when in a state of self-absorbed loneliness there is no curb on the persistent practice of the habit.

CHAPTER XI

SYNÆSTHESIA AND DEFENCE MECHANISM

IN recent years efforts have been made to discover whether a single stimulus calls forth a response from more than one sense. Investigation has shown that there are people who react in this way. The phenomenon is called synæsthesia.

A blind boy in America had colour sensations in response to a large variety of stimulations, including such diverse orders of facts as tastes and days of the week. Synæsthesia, it is contended, is an "immediate and permanent conditioned reflex." It is not due to a tangling of nerve fibres, but to a "normal and essential mental function." It is, indeed, asserted to be a "cognitive process differing in no respect from any other process of meaning." Having reached firm confidence on this point, the investigators affirm that synæsthesia is not an extraneous association, but an essential factor in the process of comprehending meaning, and is both conceptual and perceptual in character. It is probable that some of the examples given are likely to revive some interest in the "extraneous association" theory. Soft music, for instance, is said with some subjects to give rise to sensations of yellow, loud music black, and medium

loud music, blue. The subsequent comment that yellow crayon marks are more difficult to see than black, is an excellent tonic to the interpretation which the investigators themselves decry. Again, it is cited that high tones and high-pitched instruments are associated with bright colours, while low tones and low-toned instruments are associated with dark colours. Once more the ghost of "external association" pokes its head into the picture.

In face of the researches that have been made, it would be impertinent to deny that synæsthesia, pure and unalloyed, does exist in certain people, but it is doubtful if the fondness of the blind for transmuting a sense-impression which they are denied into one which they can appreciate has much connection with the facts disclosed by these psychologists. The human mind flies naturally to similarities and analogies, and is even prone to construct such where none exist. Total exclusion from experience is not to be acquiesced in without a struggle, and so the blind man uses metaphor as a grappling-iron to pull himself alongside the mind of his seeing friend. Thus it comes about that the possibility of expressing the appeal of one sense in the vocabulary of another has often been the theme for argument and discussion. Some blind people interpret colour in terms of sound. A choir boy's voice is white and a rich contralto crimson. The sense of touch can also be called into service: "Black is something rough or dirty, white is something clean and hard, yellow something slimy." This is a

derivative of the metaphor of seeing people. George Moore, in one of his novels, speaks of the yellow smell of the fox. Here the yellowness of the fox is transmitted to one of his most characteristic traits, although one that is quite distinct from sight. There is nothing yellow about an odour, yet the appellation strikes the reader as fitting because of the generally yellow connotation of the term fox. In the same way, the purity which is by long metaphorical usage associated with white is transferred in the example above quoted to the pureness of tone which is usually associated with the voice of a well-trained choir boy. In the second example, the addition of the adjective "rich" provides the clue. It has a definite meaning when applied to a colour, and also when applied to a voice. The fact that it can be applied to a colour like crimson and to a voice like a contralto, makes the mind jump to an identification of the diverse objects thus similarly described. The association between certain colours and certain sensations of touch is more difficult to connect with general metaphorical use, and is probably due to the preferences of a particular individual.

There is danger sometimes that an analogy may carry its too partial admirer uncomfortably far along strange paths. This seems to have happened to the ingenious enthusiast who constructed what might be called a photo-organ. In this elaborate instrument colours are thrown on a screen by the depressing of the keys. There is no psychological basis for thinking that one of Beethoven's Symphonies would give a finer

kaleidoscope display than a fortuitous strumming of discords. Indeed, if it should prove to be so, one would seek for the explanation, not in the mechanism of sensory perception, but in the existence of a physical connection along the line of frequency of vibration. In other words, if the invention proved an æsthetic success, it would be because of an arithmetical coincidence, not because of any essential kinship in sensory impressions. The doubling of frequency in air-vibrations gives the same note at a higher pitch, while the doubling of frequency in light-waves gives a new colour. Thus success need not be looked for even along this line of thought. If sound-effects are ignored and new photo-music worked out in terms of colour, only then the instrument may have claims to self-justification. That is another matter; but the attempt to express one sense in terms applicable to another, is little more than an amusing pastime and an interesting study in the use of words. It must not be pushed too far. That way ridicule lies; and the apostle of metem sensation calls upon his head the mocking laughter of "Lucio"—

"I have seen the turnips singing
By a lordly cabbage led;
I have heard a dewdrop clinging
To the rose that bowed her head.

"I have sniffed at a sonata,
I have touched next Friday week;
I have tasted a cantata,
I have smelt a sausage speak."

The attempts of blind people to secure a working

relationship with sense - impressions which they are denied are right and natural, but there are some prolongations of this attempt which have not the same justification. They must be regarded as manifestations of what has been called "defence mechanism." It is a curious compensatory device whose action can be traced in more than one direction. Many blind people, for instance, have a fondness for big words. In writing they affect the grand, the Johnsonian, manner. The modern cult of the conversational in style leaves them cold. They roll the word of many syllables lovingly round the tongue and quickly respond to like eloquence in others. That such a trait is allowed to persist after school-days is a reflection on the current teaching of English, for the misuse of words is, in most, an eradicable failing; but the real point at issue is that, to a degree distinctly greater than their seeing comrades, blind adolescents and adults have a tendency towards this weakness.

The designation "defence mechanism" is less familiar than the facts which can be observed in many homely and familiar situations. Human beings prefer the pleasant to the unpleasant. They therefore try to avoid the unpleasant, and in this endeavour their subliminal consciousness comes to their aid. Scrupulous people would be pained if they realised the tricks their mental underworld thus plays upon them. Subconsciousness sees to it that disagreeable appointments are forgotten and troublesome tasks slip the memory. Further, if a course of conduct has been

reprehensible, the unconscious mind invents spurious justifications and allays any uncomfortable feelings that would otherwise result. Bernard Shaw was aware of this little weakness long before the psycho-analyst had given it a classification and a name. "When an Englishman," says the man of Destiny, "wants a thing he never tells himself that he wants it. He waits patiently till there comes into his mind, no one knows how, a burning conviction that it is his moral and religious duty to conquer those who have got the thing he wants. . . . You will never find an Englishman in the wrong. He does everything on principle. . . . His watchword is duty, and he never forgets that the nation which lets its duty get on the opposite side to its interest is lost." At a still earlier period, another writer illustrated an excellent instance of defence mechanism by a story about a fox and grapes that were sour. The undersized man not infrequently carries himself with more than ordinary self-assurance, and is of an unalterable conviction that it is quality and not quantity that counts. Can the verbal exuberance of the blind be fitted into any such category? Can we not trace in this mental phase a revolt against the galling conviction of his inferiority? His subconscious mind sets about redressing the balance. If he is handicapped in regard to vision, there are other regions of activity in which no disability exists. The use of words is one of these, and he strives by an exaggeration of literary language to show his superiority to the average man. For the same reason

he makes much of the mistakes that seeing people commit: "Just the silly sort of thing a sighted man would do!" he says, and smiles complacently at the immunity of himself and his friends from such blunders.

Among ordinary folk a discussion of the problems that come from loss of sight seldom goes far without the introduction of the word *compensation*. It is as truly blessed as Mesopotamia. Nature is deemed kind, and is credited with the making up for the lack of one sense by the conferring of additional capacities on those that remain. She is even suspected of developing fresh powers that can scarcely be brought within the ambit of any known sense. Such talk is inaccurate, but the mistake is not surprising. Those who have not the use of their eyes lean more heavily on the senses of hearing, and of touch, of taste and smell. As a consequence they gain more information by their means. The blind man has developed his interpretation of messages that come to the ear to a fuller extent than has the man who possesses his sight. His skill is analogous to that of the Red Indian, whose uncanny powers of observation are the theme of so many school-boy romances. He peers through dense foliage into the clearing, and with guttural interjections, he rapidly sketches the size and composition of the party who have passed that way, the length of their sojourn, and the hour of their departure. It sounds miraculous to the city-dweller, but to the Indian it is commonplace. To him, indeed, it is much more of a miracle to

comprehend at a glance the substance of a minutely printed page.

A blind man and one with sight are together in a room. The blind man says, "That's a Ford delivery van. It is coming along the road from West to East." His companion does not trouble to listen, but jumps up and gathers his information by looking out of the window. He would not quarrel with the statement that it is possible to distinguish one type of car from another by sound alone. He agrees that as the street is on a slope, it is a simple matter to tell the direction in which the vehicle is moving. He admits all this and yet he looks out, because it is much easier for him to tell such things by the eye. He remembers, too, that a single look will give him more information than can be deduced from the most patient listening. There is an instinctive economy in the use of the tools that Nature has bestowed. A man will not crawl on all fours if he can walk erect.

In all such illustrations, the important point to note is that it is not the sensory apparatus but the mental content that has been developed. As James Gall shrewdly remarks, "The Indian who can track his way through the pathless forest has no better eyes than the bewildered European, but he has learned to make a much better use of them." In the same way, the seeing man's hearing is as good as that of the blind man, but his power of differentiation, in all classes of phenomena where the eye can also be employed, has been comparatively neglected.

When a visitor sees a blind boy reading Braille he exclaims, "What wonderfully sensitive fingers!" He is wrong, for the boy's fingers are not more sensitive than his own. It is the correlation between the brain and the finger that has been so exceptionally developed. Two people hear an announcement in a foreign tongue. To one it is a confused succession of meaningless sounds. It conveys no message. It is nothing more than an unintelligible noise. To the other it brings definite information. It may create in him profound emotion. It may affect the whole of his future, yet the hearing of the two may be equally acute. The sense-impression is the same in each, but in one listener the mental content has been enlarged to discriminate, to classify, and to interpret every modulation of sound, while in the other the appropriate pigeon-holes are empty. In learning Braille the mind is storing up a multitude of precise impressions which are registered, labelled and classified. They are there in orderly sequence, ready to emerge into the focus of consciousness as soon as the right stimulus is applied. Learning Braille is a slow process, for the mind has to grow by imperceptible degrees to its new function, but the finger is not more sensitive at the close than it was at the beginning of the training.

When the eye looks for the first time at a strange alphabet, say the German gothic type, it sees the various lines and shapes with perfect distinctness, and yet the mind has to be supplied with many new connections, and the correlations between eye and

brain have to be established by long-continued practice before the letters can be read with ease and fluency.

The various categories of responses to aural and tactual stimuli will be more complete in a blind man than in a man with sight. His mind will be more fully equipped with the appropriate content, but it must be remembered that in many directions this or that specialist will have the advantage of him. The mechanic who handles the controls of his engine gains much more information from his muscular and kinæsthetic sensations than would a blind man. A physician, as he lays his finger on the pulse of a sick man, gathers more from that slight impression than would the most skilful brailist. All depends on the amount of associated content in the mind. Dr Watson saw nothing more than a dirty boot. Sherlock Holmes, with no better eyesight, took in the whole of the Wigmore Street incident.

It must be contended, in short, that the blind have no senses which they do not share with the seeing. It is only the fuller mental content which has been developed in the blind in response to touch and hearing that leads the casual observer to such a view. There is no direction in which this is more marked than in the curious capacity for observing certain objects at a distance without the aid of sight. This power has been given many names, of which, perhaps, the most serviceable is "the sense of obstacles." It is possessed by all, but like a musical ear the degree to which it occurs varies enormously. The average person with

sight does not know that he has it any more than a potential Bach or Mendelssohn would realise his musical gifts if he lived and had always lived in a world without sound. Blind people range from those in whom the faculty is almost lacking to those who enjoy it to an extraordinary degree. With the former, training is of little avail. The attempt would be similar to that of making a tone-deaf person into a concert platform artist. Those who have the faculty to a serviceable extent, and they are the majority, train it by daily use, and reckon it a valued safeguard in their walks abroad. It should be noted, however, that those who become blind in middle life are seldom able to use it to the same extent as those who have had the benefit of early training. This is a point which should not be missed by the teacher.

What is this "sense of obstacles"? A blind man walking along the street will not collide with a tree or lamp-post. He will sense the obstruction at a distance of several feet and avoid it. He can tell the difference between a solid wall at his side and an open gateway, but if the wall is less than shoulder high, he will have more difficulty in distinguishing it. It should be noted at the outset that this faculty is not the only factor, nor even the main one, in assisting a blind man to enjoy his solitary walks. In such exercises a blind man relies much on his hearing. The resonance of his footfalls, the coming and going of other traffic noises, all contribute momentarily to his awareness of his position, and form one important class of

impressions from which he has learned to make quick and accurate deductions. If the ground be covered with snow he is as helpless as a seeing man in fog. If he is on familiar territory he will be assisted by his memory. He will not count his steps, but will have an effective though possibly subconscious recollection of how much effort and how long a span of time are required for each stage of the journey. These matters are, of course, quite distinct from the sense of obstacles. The manifestation of that "sense" has been described as a feeling of oppression on the side of the face nearest to the obstruction. What is the interpretation? Does the blind man hear the obstacle, does he detect it by the sense of touch, or is the effect due to a combination of messages from the two? These questions have given rise to much controversy, and more time has been spent on their discussion than their intrinsic importance can warrant. Yet the interest is not surprising for it has the fascination of the mysterious like the homing of pigeons or the eerie gift of second sight.

M. Kunz, a Continental authority, claims that he has made 20,000 experiments and that by their means he has proved the sensation to be due to the excitation of the nerves of touch. M. Villey no less dogmatically affirms that the phenomenon is really a subtle form of hearing. It may, of course, be that the ear plays a leading part, but rather as an organ for the detection of pressure than as the vehicle for sound.

Indeed, if the juxtaposition of an obstacle is

detected, as is probable, by the increased pressure of the air between the person and the object, it is almost certain that the ear plays an important part in the operation. The membrane of that organ is very susceptible to differences of this kind. The plunge of a tube train to a deeper level, for instance, usually causes an uncomfortable feeling of oppression in that region, although no other part of the head notices the change. This is in opposition to the almost universal statement that it is the forehead and temples which provide the discriminating nerves; but again the opposition may be only apparent. The sensation in that region may be due to suggestion. If a man is sure that he is about to receive a blow, he may feel it at the moment expected, even if the stroke fails to fall. The pain may not be so acute, but the point to notice is that actual sensation has been aroused. It is a premonitory signal urging the muscles to make some defensive or evasive motion. In the same way, when a blind man perceives a post he may detect it by the pressure on his ears, but feel the impending shock on his temples.

It is not safe to make large deductions from the fact that wrapping a veil round the face diminishes or destroys the sense. The contact of the veil brings about in itself active sensations which may well drown the feeble and elusive messages whose origin is here being discussed. The evidence which can be drawn from the capabilities in this direction of the deaf-blind is inconclusive. They have been cited as witnesses for

the touch as against the auditory theory, and *vice versa*, but the case is left pretty much as before. As a curiosity it may be worth referring to M. Guegan, a deaf-blind man who is quoted by M. Villey as declaring that every time a cold in the head deprives him of his sense of smell, he is incapable of finding his way about ! The implied deduction that M. Guegan steered his path by means of his olfactory nerves is absurd. The probability is that the cold in the head nullified the sense of obstacles by interfering with the free vibration of the drum of the ear.

CHAPTER XII

SPACE, TEMPERAMENT AND FICTION

SO much disputation has taken place as to a blind man's conception of space that it would be inadvisable to dismiss the subject without further comment. Some writers have denied that the blind can have any conception of space at all, while others have argued that such concepts are possible, but that space conceived by touch is quite different to that conceived by sight. To the metaphysician the idea of space has always presented great attractions and great difficulties. "Time and space," says Kant, "are two sources of knowledge, from which various *a priori* synthetical cognitions can be derived. Of this pure mathematics give a splendid example in the case of our cognitions of space and its various relations. As they are both pure forms of sensuous intuition, they render synthetical propositions *a priori* possible. But these sources of knowledge *a priori* (being conditions of our sensibility only) fix their own limits, in that they can refer to objects only in so far as they are considered as phenomena, but cannot represent things as they are by themselves. This is the only field in which they are valid; beyond it they admit of no objective application."

The plain man in his grossness brushes aside

such subtleties. He knows that he lives in a world of disparate objects, that one is situated here and another there. By the recognition of that simple relationship he gets on working terms with space. He is aware, in an unphilosophic way, that space is necessary to size, shape and movement, and that the gnat and the most tremendous star alike are conditioned by its three inseparables of length, depth and thickness. He sees objects in circumambient emptiness which he thinks of as space, and when he calls the object to mind he pictures it in the same way. The man born blind has no pictures either objective or subjective, but he knows from everyday experience that space is a necessity. He is as familiar with its three dimensions as the man who sees and grows to that familiarity by means of touch and hearing. He, too, can form an image in space. He has learned the size, shape, weight and texture of, say, a chair by repeated handling and use. It has been a point-to-point survey in the first, second and third instance, but the day comes when he can create an instantaneous mental image of a chair and place that image in space either before or behind him, close to or at a remote distance. It is, therefore, presuming too much to deny that the blind man has an adequate concept of space, and gratuitously imagining mysteries to claim that the space thus conceived is essentially different to the space which is ideationed by the man who can see.

Two further questions emerge. To what degree of complexity can instantaneous images be formed in the

mind of a blind person, and what area can be comprehended in a single mental gesture? The first is discussed at some length by M. Villey, who says that a heterogeneous entity like the Alps is beyond the range of his instantaneous imagining. It seems to come to this that touch and hearing, being more ineffective instruments in this connection than sight, leave more to be done by intellectual recognition, analysis, deduction and synthesis. What can be achieved in a flash by the power of visualising has to be constructed in laborious and tentative fashion by conscious mental process. The image which the seeing man forms of Alps or tropics is fragmentary and incomplete, a mere diagrammatic scrap, dissolving and inconstant. With him, too, conscious mental process must add to the fleeting pictures some factors of the connotation. Image and conscious superstructure go hand in hand as with the blind man, but the dividing line in each is at a different point. With the seeing, the image may predominate. With the blind, conscious mental effort will occupy a larger share. It is, after all, a question of degree rather than of kind.

The area which can be held within the mental grasp of the blind cannot be accurately measured. Beyond the dimensions of an average room, all merges into vagueness. As one writer says, "Were I to find myself in a large open space of ground, I should certainly have the feeling of bigness, but then again I might be brought to a place three or four times the size of the other and I should have just the same

feeling that the place was big." The summer visit of a seeing person to an upland moor is recalled in mental panoramas of wide horizons with contrasted colour splashes of blue sky, white clouds, green bracken and purple heath. There will be accompanying sensations but these will be of secondary importance. With a blind person the secondary factors are the bases of recollection. The buoyant air and the breeze on the cheek impart a feeling of spaciousness and elevation. The smell of the earth and of the vegetation accentuate the idea of open air, freedom and nearness to Nature, while the sound of the larks in the sky and the bees in the heather bring to the heart a gladsome appreciation of beauty and of the exuberance of life. Then, too, there are the massive corporal sensations of strenuous uphill movement, of the pleasant effort of muscular toil and the satisfaction of deep breathing in the scented air. The memory is, indeed, well stored with varied and comfortable recollections of the expedition, but of exact area the blind man has little notion. Point-to-point trudging recollected in terms of time and exertion would never make of him a range-finder. Andrew Peden, a clever blind lad who died in 1908 while a student at Edinburgh University, once offered some interesting remarks on this topic. "I should say," he wrote, "that the maximum distance capable of being accurately measured is not more than four or five yards. Careful habit, however, and long practice in representing distances to the mind may make it possible for a much larger range, but obviously the

amount of space would not be actually visualised, only inferred. The faculty of spatial representation would vary enormously in different individuals." The power which many of the blind possess of telling the approximate size and shape of a room is due to the sense of hearing. The resonance and echoings of their own footfalls and voices supply them with data from which they draw their conclusions. Their ideas do not pretend to exactness, but consist rather of comparisons of room with room. The effect of carpet, hangings and furniture is, of course, to make a room appear smaller since its resonance is thereby diminished.

The discussion of images should be at once a warning and a stimulus to the teacher of blind children. There are many things of which it must be impossible to convey to the mind of those born blind, an adequate idea. How can the teacher minimise the restricting influence of blindness on mental outlook? The sun and stars teach man that he belongs to a boundless universe, but the physical horizon of the sightless extends but little beyond his outstretched arms. How can these barriers be nullified? "The mind is its own place," says Milton, but he overstates his case. The growth of the mind is determined largely by interaction with environment, and the corporeal imprisonment of the blind must be combated if the soul is to walk free. The universe of light, of infinite distances, of sky and sun and moon are in themselves an enlargement educationally to the man who has eyes to see. To the blind, the sky, moon and stars can be appre-

hended only in shadowy, subjective fashion at second hand. The sun alone can give rise to a first-hand concept, and that but the formless idea which springs from the sensation of radiant heat. Yet Milton's dictum is not without its fundamental truth, and the mind of the sightless may take the wings of the morning. Look, for instance, at this fancy of Mr Siddall, of Rochdale, expressed many years ago: "I think my idea of sky and moon and stars is something like that of the Christian's idea of God, a great yet grand unknown, with a beauty which would touch our soul and thrill us in the way which music does, if we could see them." Imagination can thus ignore the encircling walls, and it is the business of the teacher to see that it has proper nourishment. This brings the discussion back to images and the necessity of stocking the mind of the blind child with first-hand material. As many objects as possible, ranging over as wide a variety as possible, must be studied by actual contact. The exploring fingers must be habituated to their task of eliciting truth, and the power of forming instantaneous images in a multitude of categories must be fostered. Description must be rationed, but the systematised pursuit of facts by tactile and muscular senses must be unlimited.

The question is often asked, To what extent and in what manner does blindness affect temperament? Curiosity along this line is natural, but reliable conclusions are difficult to obtain. Laboratory conditions are impossible, and much of the talk on the subject

must remain in the region of conjecture and probability. The blind cannot be regarded as a homogeneous class round which generalisations can be woven at will. Blindness affects temperament less than temperament affects blindness, and among the sightless are all shades of humour, from the light-hearted, gay and careless to the melancholy and depressed.

Still, the lack of sight must have some reactions on personality, and it may be worth while to explore these by looking along the directions in which blindness affects mental life. Its first effect in nullifying visual imagery has already been discussed. This is the only primary or fundamental cause of difference. The others are all secondary. They are not due to blindness directly, but to the circumstances conditioned by lack of sight.

The closing of one important avenue for the entrance of information leads to a different mental content. A man's knowledge of history, science, politics, etc., is mainly derived from intercourse with his fellows, but his knowledge of the world around him comes largely from his own observation. It is often said that a child's informal education is more important than his schooling, and a large proportion of it comes from the apprehension of his eyes. Even before he goes to school he has innumerable pictures in his memory which he may draw upon at will, checking and supplementing information from other sources. So it is after school-days are over. The *grand tour* would lose much of its educative value if the traveller were blind-

fold. Not only is the range of his perceptions broadened, but his sense of beauty, form and proportion depends upon data which are collected through the eye. In other words, it is impossible for a blind man to be as widely cultured as a seeing. It may be urged that in his own domain he may delve as deep and that through native ability he may be wiser than most, but such protestations are beside the mark. The limitations to his mental content and consequently to the material for his contemplation and judgment cannot be thus illogically ignored. On a lower level of educational values the information that comes through the eye in the course of a walk through town or country is of great importance in its totality. Whether the blind are fortunate in being denied the garish sight of advertisement hoardings is a question that may be left to the æsthete or the School Debating Society, but it is certain that his weakness in spelling is due in no small measure to this and similar deprivations. In the same way, many gaps in the circle of his knowledge are overlooked while at school, because his teacher takes it for granted that "every boy and girl knows that." It may come to light that he thinks a crocodile is the same size as a rabbit and that pineapples grow on a tree. Such mistaken notions taken singly are of small consequence, but the sum is a different matter. It may be sufficient to affect appreciably his ability to handle intelligently the unforeseen contingencies of every-day life. The ordinary wayfarer cannot avoid the blatant illustration and vehement type that summon

him to indulgence in liquid refreshment, tobacco, theatres or soap. The oblivion of the blind to such appeals is a slight but significant indication of the erasure that blots out one whole source of information. If knowledge at one entrance be cut off, the result is ignorance. Much may be done by well-planned teaching, but it is impossible to do everything by formal instruction, and the blind man is, in consequence, different to his fellow-citizens in a way that is common to every congenitally sightless individual.

It may be thought that this is all so much confined to the cognitive side of things that it has little effect on temperament. This may be so, but the same cannot be argued in regard to the further secondary effect of blindness now to be considered. This may be expressed, shortly and inadequately, as the consciousness of limitation. It has already been referred to in the paragraphs on defence mechanism, that subtle, egocentric buttress thrown up in answer to what the psycho-analyst calls an inferiority complex.

The reaction may lead, as already suggested, to a certain bumptiousness, but the opposite result is frequently seen. It can be noticed, for instance, in the change towards a depressed sadness that comes over the spirit of a blind boy as he passes at the age of sixteen from his happy, careless childhood in a residential school to the more responsible task of his occupational training. Then, for the first time, blocked avenues of work and pleasure force themselves on his attention. He begins to realise how serious is his

handicap and how restricted are his opportunities. An example may make this clear. By common consent, music is regarded as a province in which the blind are peculiarly at home. Yet even there the difficulties in the way of a blind student, compared with those that confront a lad with sight, are enough to daunt the boldest. His system of reading, admirable though it be, demands memorisation before playing is possible. The power which a seeing pianist has, of giving a competent rendering of a piece as soon as the score is placed before him, is unattainable. In other words, the repertoire of a capable musician is bounded only by the catalogues of the publishers, while that of a blind player must be carried, to the last semiquaver rest, in the precarious keeping of his memory. The prodigious resources of men like Wolstenholme and Hollins are apt to hide from the public the labour of such achievement. It is little wonder if the blind student who has no exceptional gifts cannot help at times feeling that his output of effort, perseverance and concentration is out of all proportion to the results achieved.

A similar situation will be found in any other line of craftsmanship, or indeed of any occupation where blind and seeing can be compared. The sightless worker can make good, and this to an extraordinary degree, but only by exertions that tax the nerve and will. They not unnaturally strike back and make him feel, at least in moments of depression, that the dice of fate are loaded against him.

The same holds good in pleasure as in work. The fact that sports play a prominent part in the time-table and curriculum of any good school for the blind, and that by them as by Scout and Guide Companies a strenuous endeavour towards normality is maintained, is altogether admirable, but the obstacles in the way of success are only overcome to a very partial extent and many games have to be excluded. It is true that athletics form only a small fraction of the average man's programme of pleasure and relaxation, but if he casts his mind over the rest of that field he will find again and again how seriously curtailed would his enjoyment be if the use of his eyes were withdrawn. The blind man knows this, too, and one cannot wonder if his habitual fortitude is occasionally overcast.

Another consequence of blindness is the increased tendency to introspection. The cause is twofold. Lack of sight does away with that ever-changing spectacle which distracts the mind of the ordinary man, taking him out of himself and diverting his thoughts into this or that objective channel. It is curious, indeed, to note how reluctant is the average city-dweller of to-day to be left to his own reflections. He cannot travel in train or 'bus without his book or paper. He reads without effort, mechanically, unceasingly, but to the blind man the anodyne of print is denied. Lack of sight means also greatly diminished freedom of movement. As has been already said, the blind boy or girl cannot join in the casual exercise of rushing about. Apart from organised games, his path is staid and

sober. Too much time is left for motiveless rumination which inevitably tends to be subjective in tone. Limitation of opportunity and introspection go hand in hand. The man who tries to picture what his life would be without sight must realise that one painful effect would be to drive him persistently more and more in upon himself. The blind man is, indeed, bound by the hard logic of facts to acquiesce in a life of abnormal introspection. At the same time, the message to the teacher is clear. He must see that as much movement as possible is brought into the daily life of his charges; that a love of activity in general and of Braille-reading in particular is fostered till it becomes an automatic rule of conduct. The man who has been disciplined along such energetic lines in school-days will realise in later years the magnitude of the debt he owes.

Such factors as the above must undoubtedly impinge and react on temperament, but it will be granted that only within severely restricted limits can generalisations be valid. In this connection it is interesting to look at the blind man in fiction and ask to what extent he corresponds with the blind man in fact. These characters form a somewhat bizarre gallery. Many have a strong family resemblance to one another and would not have been considered by the Victorians as fit companions for a conventional young lady. They are a picturesque but unprepossessing company, and the blind citizen of real life might be excused for turning on the novelist and telling him that his vaunted

power of vision had led him astray. He might protest with solid reason that the show of things had proved a distraction tending to confuse the motions of pure thought. Sight had contributed prejudiced evidence as the malevolent and uncomely figures of Stagg, Duncan Mackiegh and Hassan Akbar abundantly prove.

The novelist is influenced by an unprepossessing picture and forgets that a man is not necessarily as forbidding as he looks. Loose ends of thought which should have been allowed to go their separate ways have been tied together in a spurious knot of cause and effect. The disfiguring aspect of damaged orbs or hollow sockets, or even the strangeness of unseeing eyes that stare, is repellent. There is discordance where there should have been beauty. There is no answering gleam to a smile or merry twinkle. All is blank, secretive and unresponsive, and yet, behind that wall, impassive and reserved, works maybe an agile and questioning mind. It is an unnatural combination. Such things are sinister, and so the false syllogism is completed to the discomfiture of the blind.

An early instance of the blind man in fiction is to be found in the *Life of Lazarillo de Tormes*, a Spanish romance which first saw the light in 1554. This book, which is a sort of precursor in miniature of *Gil Blas* or *Roderick Random*, describes the vicissitudes of a poor boy in his adventure through life. He begins his career by falling, at the age of ten, into the clutches of a blind beggar. By an atrocious trick, he eventually

dissolves the galling and unequal partnership, but not until he has suffered much. The tale brings out clearly the malignity, astuteness and cunning that are the common traits of the blind man as conceived by the novelist :

“ We went out of Salamanca and came to the bridge. There is, at the entrance of it, an animal of stone which almost has the shape of a bull. The blind man told me to go near this animal, and, being there, he said, ‘Lazaro, put your ear against this bull, and you will hear a great noise inside.’ I did so, like a simpleton, believing it to be as he said. When he felt that my head was against the stone, he raised his hand and gave me a tremendous blow against the devil of a bull, so that I felt the pain for more than three days. Then he said to me, ‘This will teach you that a blind man’s boy ought to be one point more knowing than the devil himself,’ and he laughed heartily at his joke.”

This is characteristic, but lacking in the suggestion of abnormal and uncanny powers which is so frequent an ingredient in the novelist’s creation. There floats back from school-days’ memories the horrid fascination which Stevenson wove into the harmless tapping of a blind man’s stick :

“ I saw someone drawing slowly near along the road. He was plainly blind, for he tapped before him with a stick, and wore a great green shade over his eyes and nose ; and he was hunched, as if with age or weakness, and wore a huge old tattered sea-cloak with a hood,

that made him appear positively deformed. I never saw in my life a more dreadful-looking figure. He stopped a little from the inn, and, raising his voice in an odd sing-song, addressed the air in front of him :

“‘Will any kind friend inform a poor blind man, who has lost the precious sight of his eyes in the gracious defence of his native country, England—and God bless King George!—where or in what part of this country he may now be?’

“‘You are at the “Admiral Benbow,” Black Hill Cove, my good man,’ said I.

“‘I hear a voice,’ said he—‘a young voice. Will you give me your hand, my kind young friend, and lead me in?’

“‘I held out my hand, and the horrible, soft-spoken, eyeless creature gripped it in a moment like a vice. I was so much startled that I struggled to withdraw ; but the blind man pulled me close up to him with a single action of his arm.

“‘Now, boy,’ he said, ‘take me in to the captain.’

“‘Sir,’ said I, ‘upon my word I dare not.’

“‘Oh!’ he sneered, ‘that’s it! Take me in straight, or I’ll break your arm.’ And he gave it, as he spoke, a wrench, that made me cry out.

“‘Sir,’ said I, ‘it is for yourself I mean. The captain is not what he used to be. He sits with a drawn cutlass. Another gentleman——’

“‘Come, now, march,’ interrupted he ; and I never heard a voice so cruel, and cold, and ugly as that blind man’s. It cowed me more than the pain ; and I began to obey him at once, walking straight in at the door and towards the parlour, where our sick old buccaneer

was sitting, dazed with rum. The blind man clung close to me, holding me in one iron fist, and leaning almost more of his weight on me than I could carry. 'Lead me straight up to him, and when I'm in view cry out, "Here's a friend for you, Bill." If you don't I'll do this,' and with that he gave me a twitch that I thought would have made me faint. Between this and that, I was so utterly terrified of the blind beggar that I forgot my terror of the captain, and as I opened the parlour door, cried out the words he had ordered in a trembling voice.

"The poor captain raised his eyes, and at one look the rum went out of him and left him staring sober. The expression of his face was not so much of terror as of mortal sickness. He made a movement to rise, but I do not believe he had enough force left in his body.

"'Now, Bill, sit where you are,' said the beggar. 'If I can't see, I can hear a finger stirring. Business is business. Hold out your right hand. Boy, take his right hand by the wrist, and bring it near to my right.'

"We both obeyed him to the letter, and I saw him pass something from the hollow of the hand that held his stick into the palm of the captain's, which closed upon it instantly.

"'And now that's done,' said the blind man; and at the words he suddenly left hold of me, and, with incredible accuracy and nimbleness, skipped out of the parlour and into the road, where, as I still stood motionless, I could hear his stick go tap-tap-tapping into the distance."

The novelist may, of course, retort that Smith and Robinson, plodding cheerfully to their daily jobs of

basket-making or piano-tuning, sober citizens with wife and children, paying rates and taxes and grocers' bills, expending a disproportionate amount of life and labour on the stark necessity of making ends meet, are not in the least suited to the high purposes of art as represented by the villains of romance.

APPENDICES

I

INSTITUTIONS FROM 1800 to 1850

Norwich.—In 1805 Thomas Tawell, a well-to-do citizen of Norwich, who like Rushton of Liverpool had been blind and had recovered some of his sight, founded in his own town an Asylum and School. He was successful in securing municipal support, and he himself gave liberally of his own time and money. As the name indicates, the institution comprised two sections, one for pupils and one for the aged blind. The pupils received both elementary education and trade instruction, while the Asylum inmates were expected to work in return for their maintenance. The number of pupils was never to exceed twice the number of old people, and this proportion seems to have been generally maintained. The initial number was 14, which by 1841 had risen to 49, of whom 34 were pupils. The age of admission was at first 12, but this was later reduced to 10, the favourite starting-point in those days. The elementary work was altogether given up in 1901, and the institution is now, like Nottingham and others, limited to technical instruction and employment.

Glasgow.—The institution at Glasgow was not founded till 1825, though the initial money for its founding had been bequeathed twenty years earlier. When it did start it made an ambitious beginning with a special Act of Parliament and strong municipal support. It acquired buildings with two

acres of land in a central position, and comprised an elementary school, a training centre, and workshops for adults. One praiseworthy and exceptional feature in its programme was that from the first it found employment for all whom it trained if they were capable and well-behaved. The School was a residential one and there was no Asylum for the aged blind.

York.—The School at York was opened in 1835 as a memorial to William Wilberforce. The Committee secured the tenancy of a historic building known as the King's Manor, which had first been the house of the Abbot of St Mary's Abbey and later the official residence of the President of the Council of the North. It continued to be so used till the Council was abolished in 1641. The School gave elementary education, industrial training, and had workshops attached in which employment was provided.

London.—The **School for the Blind, Swiss Cottage**, was started, as has been noted on page 48, in 1838, as the **London Society for Teaching the Blind to Read** in accordance with the principles of Mr Lucas's system. After a sojourn at various addresses in Bloomsbury it moved to Hampstead in 1848. At the outset its pupils stayed normally for six months, which was judged sufficient to acquire mastery of the system, but this was soon abandoned. Also before many years had passed other subjects were added to the elementary curriculum, training in industrial subjects was introduced and the School came into line with the Institutions for the Blind of its day. It made, however, no provision for employment, at least within its own walls.

In accordance with its programme it encouraged the establishment of branch schools, and by 1841 had seen classes opened in Exeter, Bath, Nottingham, Leamington and Plymouth. Several of these faded away in a few years, but it may be noted that when Plymouth started its own

institution in 1858 its instruction in reading was by means of Lucas.

Exeter.—The institution at Exeter was opened only a few months later than its parent organisation. From the outset the teaching of reading was combined with training in one or other of the customary handicrafts—basket-making, chair-caning, knitting, netting, etc. In 1840 a spinning-wheel was purchased, presumably as an additional occupation. The leading spirit in these early years was a Mrs Friend, who continued her control and influence until her death in 1875. The School moved to its present address at St David's Hill in 1843, but like most other institutions numerous changes and extensions have taken place since then. The School began as a day centre, but by 1855 it had sleeping accommodation for 20 boys, and dormitories for girls were added later.

Newcastle.—The early career of the institution at Newcastle was marred by contention. A start was made early in 1838 with a body known as the **Asylum for the Blind of Newcastle-upon-Tyne, and for the Counties of Northumberland and Durham**, but a dispute arose as to the details of the religious instruction to be imparted, and in the month of June of the same year a rival organisation took the field. Just a fortnight later a third Society was brought into being in the hope that it might induce the contestants to unite with it, and so with one another. Fusion with the original body was secured, but the second proved intransigent until 1848, when the lapse of time had blunted the edge of controversy. The principal institution was known as the **Royal Victoria Asylum for the Industrious Blind**. Its functions were the usual combination of education and training. In its early years it also gave employment to the older blind, and considerable sales were effected of goods made by workers and pupils. In 1849, through

mistaken ideas of economy employment was jettisoned, and when in 1867 workshops were established, they were carried on under separate management.

The functions of this and many others of these early institutions could not be more clearly put than in the words of the record of the first quarterly meeting of subscribers held 1st May 1838: "The object is to afford to the indigent blind a religious, moral and elementary education founded on Scriptural principles, and to teach them such trades as are suitable to their capacities."

Manchester.—The foundation stone of the Manchester Institution was laid in 1835, and the building was opened in 1839. A large sum had been left in 1810 by Thomas Henshaw of Oldham as an endowment fund, but the will was contested and the Court of Chancery took twenty years to decide that the bequest was valid. The public, too, were slow to make the necessary contributions for land and buildings, so that Henshaw had been dead for thirty years before his generous gift, now swollen by interest to £50,000, was put to use.

At the outset it attempted no elementary education, but limited its activities to industrial training and the provision of employment to the poor and infirm blind whom it housed. In 1864 only seven of the seventy inmates were under the age of 14.

Nottingham. — The institution at Nottingham was founded in 1843. Although begun for the instruction of the blind in Lucas type under the ægis of the **London Society**, it early broke away from any links with London. From the first it was intended to serve a wider area than that of the town. Its name was the **Midland Institution**, and it drew its pupils, subscriptions, and committee from the five counties of Nottingham, Leicester, Derby, Lincoln and Rutland. This district it still serves, with the exception of Leicester and

Rutland which opened workshops of their own in 1859. As in the case of Bristol, the initial efforts were made by one or two members of the Society of Friends. The object of the foundation was to give a "plain and useful education," but from the outset industrial training and the manufacture of goods for sale seem to have formed parts of the scheme. The extent of the accommodation in its first quarters was 7 boarders and 11 day pupils. In a dozen years the numbers had increased to 38 boarders and 15 day pupils. The usual industries were taught, but it is an interesting feature that most of the workshops in these early days leaned most heavily on one particular occupation. Thus Bristol was strongest in baskets, St George's in mats, Glasgow in mattress-making, and Nottingham in brushes. Another point worthy of attention is that those institutions which admitted children agreed on 10 years as being the lowest age for practicable tuition. Elementary education was given up by the Nottingham Institution in 1901.

Birmingham.—Many of the agencies for the blind grew from small beginnings, but none exemplify this growth more clearly than the great institution at Birmingham. Like the School at Nottingham it began as a branch of the **London Society**, and its main purpose was the instruction of pupils in the Lucas system. As the Report of the Society for 1847 proudly remarks: "The commencement of a School for the Blind in the centre of that densely-populated district is a most important advance of the system. To begin with, the numbers of pupils was 7, but this number rapidly increased and several changes of address were necessitated before a permanent habitation was built in Carpenter Road, Edgbaston. This was in 1851 and by that time the institution had outgrown its initial stage of being a dame's School and was a flourishing enterprise with large private and municipal support. Its purpose was to instruct the blind in the Holy Scriptures and to impart training in some trade by which they could

contribute to their own livelihood. One unusual feature was the appointment in 1854 of an outdoor instructor whose function it was to give training to the blind in their own homes. Soon after the middle of the century the School began to win deserved credit for its choir work and for the qualified organists whom it sent out.

Ireland.—In Ireland four institutions were set on foot before 1850. Two Asylums were opened in Dublin, the **Richmond National Institution for the Blind** (Protestant) in 1810 and the **Molyneux Asylum** (Catholic) in 1815. The **Ulster Society for Promoting the Education of the Deaf and Dumb and the Blind** opened a School in Belfast in 1831 and the **Cork Asylum** was started in 1843.

The mention of three more British institutions makes the tale complete. In 1812 an **Asylum for the Blind** was opened in Aberdeen, in 1841 a **Catholic Blind Asylum** began its labours at Brunswick Road, Liverpool, and in 1842 an **Asylum for the Instruction of the Blind** saw the light in Brighton.

United States of America.—To this brief survey of the early British institutions may be added a note on the three earliest schools of America. The first was designed in 1829 by John D. Fisher for the blind children of New England, but was not opened till 1832 when Dr Samuel Gridley Howe gathered together six pupils in Boston. In the following year the School was removed to the house of Thomas Handasyd Perkins in Pearl Street and from there in 1839 to Mount Washington House, South Boston. In 1912 it was moved to spacious new buildings and grounds in the suburb of Watertown and is now known as the **Perkins Institution and Massachusetts School for the Blind**.

The education of blind children in Philadelphia was begun in 1832 when Junius Friedlander undertook the training

of two pupils in his own house and at his own expense. From this experiment arose in the following year the **Pennsylvania Institution** with Mr Friedlander as its first Principal. In 1834 the School was moved to larger premises, and again in 1836. There the work was carried on for sixty-three years, until in 1899 it was transferred to its present site in Sixty-fourth Street.

In 1832 Dr Samuel Akerly and Mr ^{Samuel} William Wood secured the voluntary services of a young physician, Dr John D. Russ, as teacher to three blind orphan boys in the city of New York. Two small rooms were rented in Canal Street, but in a few months the infant organisation had to seek larger accommodation in Mercer Street. In the next year it moved to Thirty-fourth Street. Here a new building was erected in 1837-42 and housed the Institution till 1924, when it was transferred to Pelham Parkway. Dr Russ was in office for less than three years and was followed by half-a-dozen short term Principals, until in 1859 William B. Wait began a connection with the school which lasted till his death fifty-seven years later.

These three schools are typical of the American system in that they are now purely educational establishments although in their early days they made some half-hearted attempts at industrial training and employment.

Continent of Europe.—The early years of the nineteenth century saw many schools spring up on the Continent of Europe. In 1804 one was opened in Vienna and in 1806 one at Steglitz near Berlin. In 1807 two institutions saw the light, one at St Petersburg founded by Valentin Haüy and the other at Dresden made familiar to British workers by Dr Armitage's warm advocacy of its methods in dealing with its former pupils. 1808 was a fruitful year and saw the opening of schools at Amsterdam, Prague and Stockholm. In 1811 Copenhagen joined the list of pioneer institutions.

II

EDUCATION ACT, 1921

(References to other than blind children have been omitted.)

61. For the purposes of this Act the period of compulsory education shall, in the case of a blind boy or girl, extend to the time when such boy or girl attains the age of 16 years, and the attendance of such boy or girl at school may be enforced as if it were required by byelaws made under Part IV. of this Act.

62. A local education authority for elementary education shall have the same powers in relation to the provision of schools for the purposes of this part of this Act as they have in relation to the provision of school accommodation under Part III. of this Act.

63. (1) A school shall not be certified by the Board of Education as suitable for providing elementary education for blind children—

- (a) if it is conducted for private profit; nor
- (b) unless it is either managed by a local education authority, or the annual expenses of its maintenance are audited and published in accordance with regulations of the Board of Education; nor
- (c) unless it is open at all times to the inspection of His Majesty's inspectors of schools and of any visitors authorised by any local education authority sending children to the school; nor
- (d) unless the requirements of this part of this Act are complied with in the case of the school.

(2) Every school so certified may for the purposes of the provisions of this Act relating to school attendance orders,

in the case of children to whom this part of this Act applies, be treated as if it were a public elementary school.

(3) Every such certificate shall be annual.

64. (1) If and so far as the school, which a child is required to attend in pursuance of this part of this Act, is not a public elementary school, it must, in all matters relating to the religious instruction and observances of the child, be conducted in accordance with the rules applying to industrial schools, except that in the provisions of the Children Act, 1908, relating to industrial schools, and the rules made thereunder, references to the Secretary of State shall be construed as references to the Board of Education; and any local education authority may provide and maintain for the purposes of this part of this Act a school so conducted.

(2) Every rule made under this section shall be forthwith laid before both Houses of Parliament.

(3) In selecting a school under this part of this Act the local education authority shall be guided by the rules relating to industrial schools, laid down by the Children Act, 1908, and if a child is boarded out in pursuance of this part of this Act, the local education authority shall, if possible, arrange for the boarding out being with a person belonging to the religious persuasion of the child's parent.

(4) Where a child is required in pursuance of this part of this Act to attend any school, the child shall not be compelled to receive religious instruction contrary to the wishes of the parent and shall, so far as practicable, have facilities for receiving religious instruction and attending religious services conducted in accordance with the parents' persuasion, which shall be duly registered on the child's admission to the school.

65. (1) Where the local education authority incur any expense under this part of this Act in respect of any blind

child, the parent of the child shall be liable to contribute towards the expenses of the child such weekly sum, if any, as, regard being had to the duty of the local education authority to provide a sufficient amount of public school accommodation without payment of fees, may be agreed on between the local education authority and the parent, or, if the parties fail to agree, as may, on the application of either party be settled by a court of summary jurisdiction, and any sum so agreed on or settled may, without prejudice to any other remedy, be recovered by the local education authority summarily as a civil debt.

(2) It shall be the duty of the local education authority to enforce any order made under this section, and any sum received by a local education authority under this section may be applied by that authority in aid of their general expenses.

(3) A court competent to make an order under this section may at any time revoke or vary any order so made.

66. Payments under this part of this Act in respect of a blind child shall not be made on condition of the child attending any school certified by the Board of Education for blind children, other than such as may be reasonably selected by the parent, nor refused because the child attends or does not attend any particular school so certified.

67. Nothing in this Act shall prevent the Board of Education from giving aid from the parliamentary grant to a certified school in respect of education given to blind children under this part of this Act, to such amount and on such conditions as may be directed by or in pursuance of the regulations of the Board in force for the time being.

68. The Board of Education shall in their annual report to Parliament furnish particulars of their proceedings under this part of this Act, and give lists of the schools and classes

to which they have granted or refused certificates under this part of this Act during the year to which the report relates, with their reasons for each such refusal.

69. In this part of this Act, unless the context otherwise requires—

The expression “blind” means too blind to be able to read the ordinary school books used by children.

The expression “school” includes any institution in which blind children are boarded or lodged as well as taught, and any establishment for boarding or lodging children taught in a school certified as a school for blind children.

The expression “elementary education” may include industrial training, whether given in the school which the child attends or not.

The expression “expenses,” when used in relation to a child, includes the expenses of and incidental to the attendance of the child at a school, and of and incidental to the maintenance and boarding out of the child while so attending, and the expenses of conveying the child to or from the school.

III

BLIND PERSONS ACT, 1920

1.—Every blind person who has attained the age of fifty shall be entitled to receive and to continue to receive such pension as, under the Old Age Pensions Acts, 1908 to 1919, he would be entitled to receive if he had attained the age of seventy, and the provisions of those Acts (including the provisions as to expenses, but excluding the provisions of subsection (2) of section ten of the Old Age Pensions Act,

1908, relating to the giving of notices by registrars of births and deaths) shall apply in all respects to such persons as if for the first statutory condition there were substituted a condition that the person must have attained the age of fifty, and be so blind as to be unable to perform any work for which eyesight is essential, and as if for references to "seventy" and "fifty" there were respectively substituted references to "fifty" and "thirty."

2.—(1) It shall be the duty of the council of every county and every county borough, whether in combination with any other council or councils or otherwise, to make arrangements to the satisfaction of the Minister of Health for promoting the welfare of blind persons ordinarily resident within their area, and such council may for this purpose provide and maintain or contribute towards the provision and maintenance of workshops, hostels, homes, or other places for the reception of blind persons whether within or without their area and, with the approval of the Minister of Health, do such other things as may appear to them desirable for the purpose aforesaid. The Council shall, within twelve months after the passing of this Act, prepare and submit to the Minister of Health a scheme for the exercise of their powers under this section.

(2) The expenses incurred by a council under this section shall be defrayed in the case of a county council out of the county fund as expenses for general county purposes and in the case of a county borough council out of the borough fund or borough rate.

(3) A council may borrow for the purposes of this section in the case of a county council in accordance with the Local Government Act, 1888, and in the case of a county borough council, in accordance with the Public Health Acts, 1875 to 1908, but the money so borrowed by the council of a county borough shall be borrowed on the security of the borough fund

or borough rate, and money borrowed for the purposes of this section shall not be reckoned as part of the debt of the council for the purposes of any provision limiting the powers of borrowing by the council.

(4) A council may exercise any of the powers conferred by this section (other than the power of raising a rate or of borrowing money) through a committee of the council, and may appoint as members of the committee persons specially qualified by training or experience in matters relating to the blind who are not members of the council, but not less than two-thirds of the members of every such committee shall consist of members of the council, and a committee established under this section may, subject to any direction of the council, appoint such and so many sub-committees consisting either or partly of members of the committee, as the committee thinks fit.

(5) This section shall apply to the City of London as if it were a county borough and the common council were the council of a county borough, and any expenses of the common council under this section shall be defrayed out of the general rate.

(6) Nothing in this section shall affect the powers and duties of local education authorities under the Elementary Education (Blind and Deaf Children) Act, 1893, or the Education Acts, 1870 to 1919, and local education authorities in the exercise of their duty to contribute to the establishment of a national system of public education available for all persons capable of profiting thereby, shall make or otherwise secure adequate and suitable provision for the technical education of blind persons ordinarily resident in their area who are capable of receiving and being benefited by such education.

(7) For the purposes of this section, a blind person who becomes an inmate of an institution for the blind after the commencement of this Act shall be deemed to continue to be

ordinarily resident in the area in which he was ordinarily resident before he became an inmate of such institution.

3.—(1) The War Charities Act, 1916, shall apply to charities for the blind as if it were herein re-enacted and in terms made applicable to such charities, subject, however, to the following modifications:—

- (a) The registration authority shall, as respects the City of London, be the common council of the City of London, and elsewhere the county council or county borough council;
- (b) Notwithstanding anything in subsection (3) of section two of the Act, the registration authority may refuse to register a charity if they are satisfied that its objects are adequately attained by a charity registered under the Act;
- (c) Notwithstanding anything in section four of the Act, the fee payable on registration of a charity may exceed ten shillings, but shall not exceed two guineas;
- (d) Regulations made by the Charity Commissioners under section four of the Act shall be subject to the approval of the Minister of Health instead of a Secretary of State;
- (e) Where a charity is removed from the Register, the Charity Commissioners may exercise, in relation to the charity, any powers which they are authorised by section six of the Act to exercise in relation to charities registered under the Act for the purposes of an appeal thereunder; and
- (f) Where any of the conditions mentioned in section three of the Act are not complied with in respect of any registered charity, any person who, by regulations made under section four of the Act,

may be made responsible for the observance of those conditions shall be guilty of an offence against the Act.

(2) Regulations may be made by the Charity Commissioners subject to the approval of the Minister of Health for providing that in the case of any charities for the blind which have, before the passing of this Act, been registered under the War Charities Act, 1916, the registration under that Act shall have effect as registration by the appropriate registration authority under this Act and for making such consequential provisions as may be necessary for that purpose.

(3) In this section "charity for the blind," means any fund, institution, or association (whether established before or after the commencement of this Act) having or professing to have for its object or for one of its objects the provision of assistance in any form to blind persons or any other charitable purpose relating to blind persons, but shall not include any fund, institution, or association where any such object as aforesaid is subsidiary only to the principal purposes of the charity.

4.—(1) This Act shall apply to Scotland subject to the following modifications:—

(a) Subsections (2) and (3) of section two, and paragraphs (d) and (e) of subsection (1) of section three shall not apply;

(b) The following subsection shall be substituted for subsection (6) of section two—

(6) Education authorities under the Education (Scotland) Act, 1918, shall make or otherwise secure adequate and suitable provision for the technical education of blind persons ordinarily resident in their areas who are capable of receiving and being benefited by such education.

(c) The expression "county borough" has the meaning assigned thereto in section one hundred and thirty-two of the Children Act, 1908, and the provisions of subsection (21) of that section so far as applicable to county and town councils shall apply for the purposes of this Act with the substitution of references to this Act for references to the Children Act, 1908, or any section thereof;

(d) References to the Minister of Health and to the Charity Commissioners shall be construed as references to the Scottish Board of Health.

(2) This Act shall apply to Ireland subject to the following modifications:—

(a) References to the Minister of Health shall be construed as references to the Local Government Board for Ireland;

(b) The expenses incurred by a council under this Act shall be defrayed out of the poor rate, and in the case of a county council shall be raised as a county at large charge, and a council may borrow for the purposes of this Act under Article 22 of the Schedule to the Local Government (Application of Enactments) Order, 1898.

5.—This Act may be cited as the Blind Persons Act, 1920, and shall come into operation on the tenth day of September nineteen hundred and twenty.

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